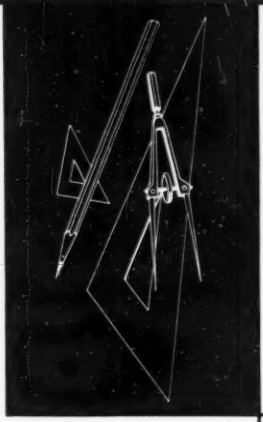
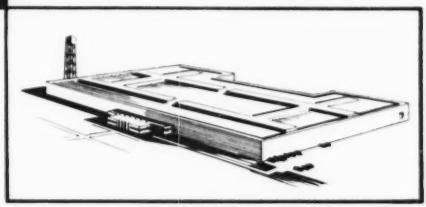
Textile Industries

formerly COTTON Textile Industries





From Fibre to Fabric—

—The *Engineer* plans for your progress and preparedness

Every step in your process from fibre to fabric—from any raw material to finished product—can be critical if not correct. If planned and integrated with your needs, it's but a stepping stone on a smooth path to market.

Today's planning needs go far beyond the technical requirements of the product—equally important are the human elements that far-sighted management and the Engineer work to make an integral part of every business plan. So wise management looks to the Engineer to help weave progress and preparedness into the fabric of the future.

Engineers for 50 years... **J. E. SIRRINE COMPANY**

GREENVILLE • SOUTH CAROLINA

DEPARTMENTALIZED ENGINEERING ORGANIZATION SERVING WORLD-WIDE INDUSTRY

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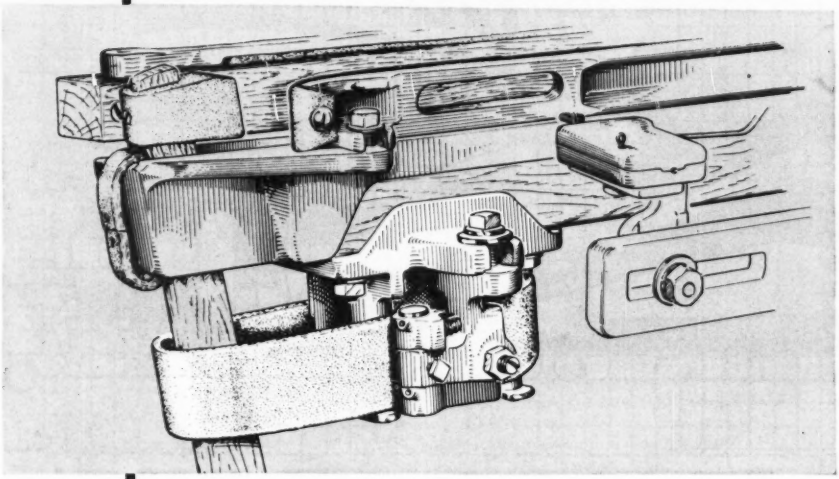
Volume 116 Number 5

28 Different Combinations

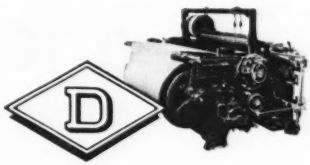
to give proper shuttle checking conditions



● If you are interested in a Shuttle Check with Endless Check Straps, there are 28 different combinations necessary to cover all the conditions on the various models of Draper looms currently in the field. One Shuttle Check cannot hope to meet every condition successfully.

To insure that you get the proper combination of Shuttle Check parts for your particular weaving conditions, buy from Draper. For with Draper, you will receive the correct combination of parts, backed up by Draper experience, servicemen, and engineers. Don't take a chance, consult a Draper representative before ordering.

"Retaining Leadership through Research"



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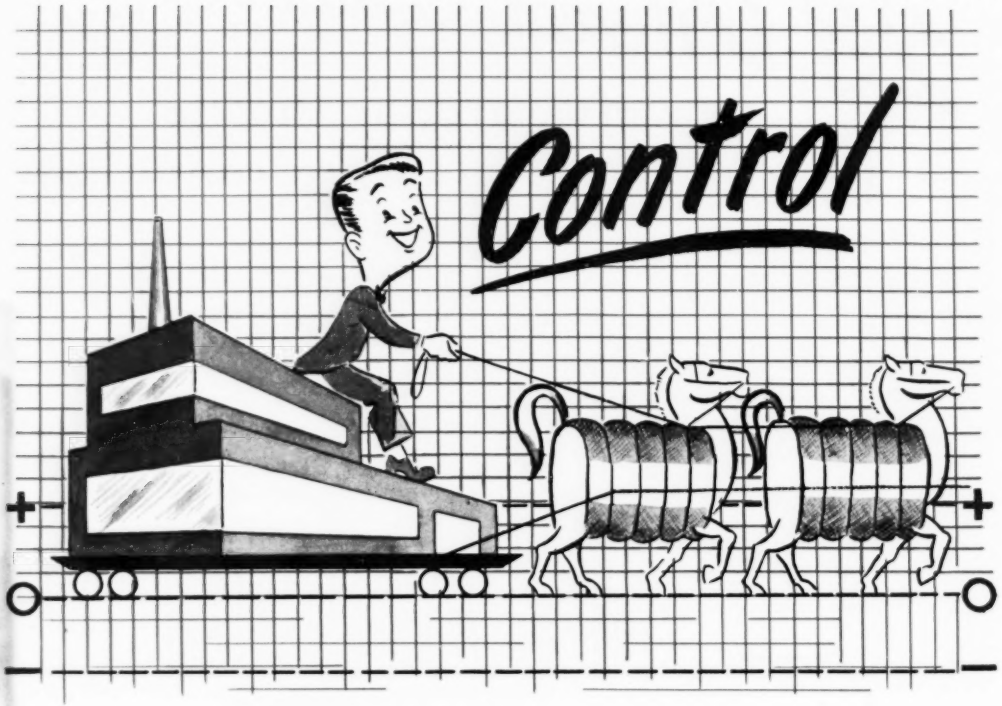

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Properly selected cotton tends to insure uniformity of operation. Consult our Technical Service Engineers on your cotton problems.

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Memphis, Tenn.

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Textile Industries

COTTON

Volume 116, Number 5
May, 1952

Editorial and Executive Offices: 806 Peachtree St., N. E., Atlanta 5, Georgia

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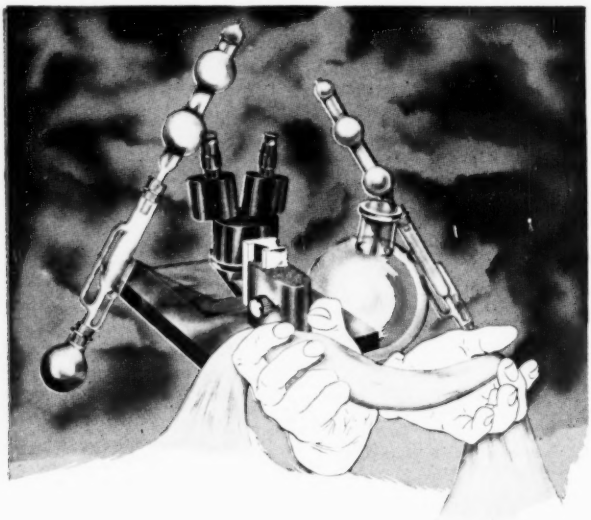
Service . . . Dependability . . . Quality Control



Why Does Star Woolen Offer FREE Laboratory Analysis of Your Fibres?

With the increasing use of synthetics in blends, many mills now find their testing facilities totally inadequate to meet the requirements of labeling laws and efficient processing. Accordingly, Star Woolen offers its modern, expanded laboratory services, without cost or obligation, as its contribution to the advancement of fibre technology in the textile industry.

Laboratory Control in Textile Fibres and Synthetic Garnets.

The primary function of Star Woolen's greatly expanded laboratory facilities is, of course, the constant control of our own production, at every stage. This exacting double-checking assures you of the utmost in product uniformity and truly superior textile fibres and synthetic garnets . . . whether your requirements call for wool, any of the new synthetics, or blends.

WRITE FOR FREE DESCRIPTIVE FOLDER 52B

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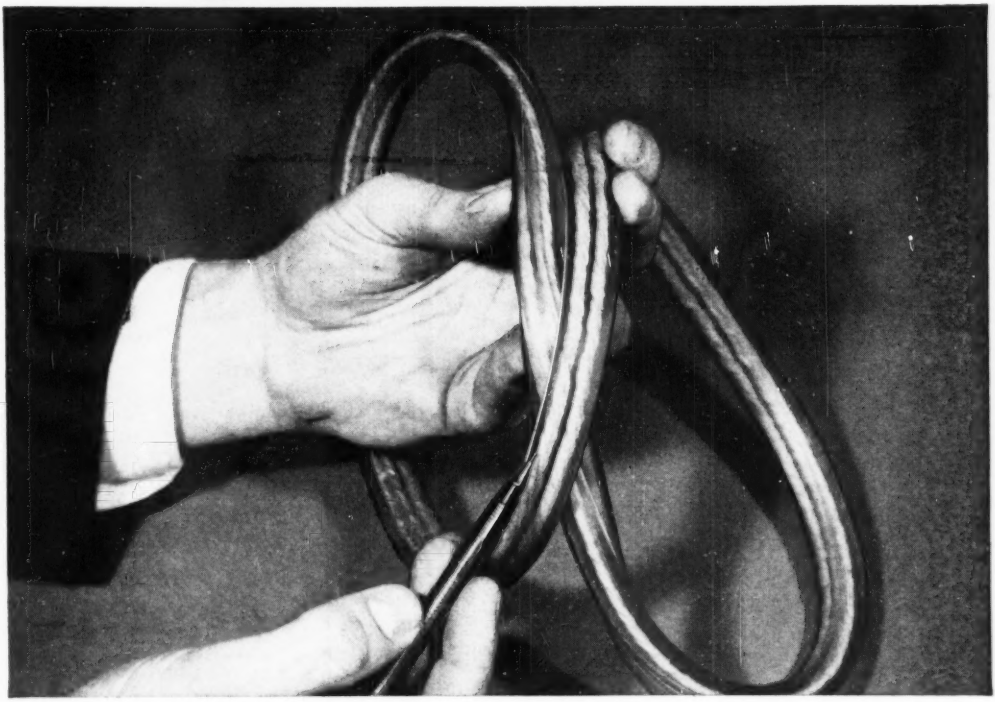
Cohoes, New York

RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER



Now you can see the difference between grommet belts and ordinary V belts

B. F. Goodrich grommet V belts last longer, serve better, save money

THE "X-ray" belt, made of transparent material, was developed just to show you the exclusive B. F. Goodrich grommet construction. Now you can look beneath the surface of a V belt, see for yourself what makes B. F. Goodrich grommet V belts last longer, keep running with fewer interruptions, need less attention.

Note the twin grommets — Each of these grommets is like a giant cable except that it's *endless* — a cord loop built up by winding heavy cord on itself. It has no overlapping ends. Because most of the failures in ordinary V belts occur in the region where cords overlap, the endless cord section in a grommet V belt eliminates such failures.

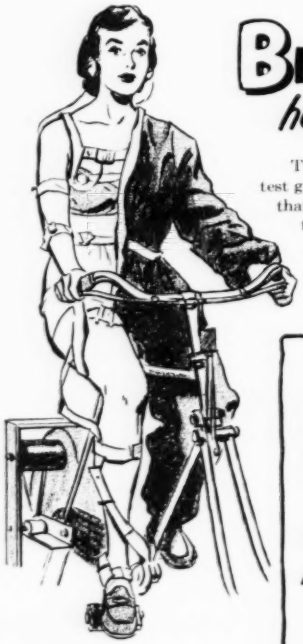
Concentrated cord strength — All of the cord material in a B. F. Goodrich grommet multiple-V belt is *concentrated* in twin grommets, positioned close to the driving faces of the pulley. No layers of cords to rub against one another and generate heat; cord and adhesion failures are reduced.

Better grip, less slip — Grommet belts have more rubber in relation to belt size. Without any stiff overlap, they're more flexible, grip pulleys better. Size for size, grommet belts give ⅓ more gripping power, pull heavier loads with a higher safety factor. Because there is less slip, there is also less surface wear.

Only B. F. Goodrich has the grommet!—No other multiple-V belt is a grommet V belt (U. S. Patent No. 2,233,294). Now available in C, D and E sections. Your local BFG distributor has an "X-ray" demonstrator belt and will be glad to show it to you. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

Grommet V Belts BY
B.F.Goodrich
RUBBER FOR INDUSTRY

FIBER FARE... from Du Pont

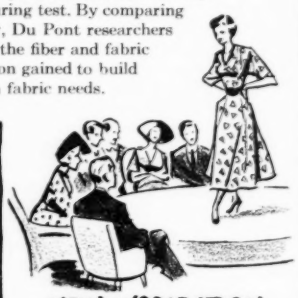


BICYCLE BUILT FOR RESEARCH—
helps make clothing more comfortable!

This pedal-pushing young lady is completely clothed on one side in a test garment. Wires strapped to many portions of her body lead to instruments that record skin temperature and presence of perspiration. Records of body temperature and weight loss are also made during test. By comparing measurements from both sides of her body, Du Pont researchers attempt to determine the "comfort" of the fiber and fabric weave, and expect to use the information gained to build into fibers qualities to meet modern fabric needs.

STRENGTH AND *Beauty* IN THE SAME MAN-PLANNED FIBER

Rayon has long been an established leader in women's wear. Yet this same fiber, in the form of Du Pont "Cordura" High Tenacity Rayon, supplies strength to auto tires, conveyor belts and other industrial products. Man-planned fibers offer variety that nature could never attain.



NEW INSPIRATION FOR DESIGNERS ...FROM ACETATE

Today's fashion news spotlights how leading designers here and abroad are using acetate for drapability and texture interest. Acetate has a luxurious feel; produces beautiful fabrics alone or in blends.

MORE STOPPERS FOR SHOPPERS

Into the homes of consumers go big-space ads like this, appearing now in the April 26 *Saturday Evening Post*, May *American Magazine* and May 10 *Collier's*. The ad starts with an interesting "stopper" about fiber research; and it includes specific information about each of the five Du Pont fibers.

FIBER FACTS DO A SELF-SELLING JOB!

Informative labeling is one of the effective methods by which you can pass the fiber facts along to the shopper. Today's shopper is fiber-curious—she *looks* for information that tells her the exact fiber content and wearing properties of a garment. By reading a really informative label, a shopper can often *sell herself* on apparel. So display the label—*always!*

RAYON
DACRON* polyester fiber
NYLON
ACETATE
ORLON* acrylic fiber

*DU PONT TRADE MARKS

Textile Fibers Department, E. I. du Pont de Nemours & Co. (Inc.), Wilmington, Delaware. Du Pont makes only the fibers—not the fabrics or finished products shown.

DU PONT
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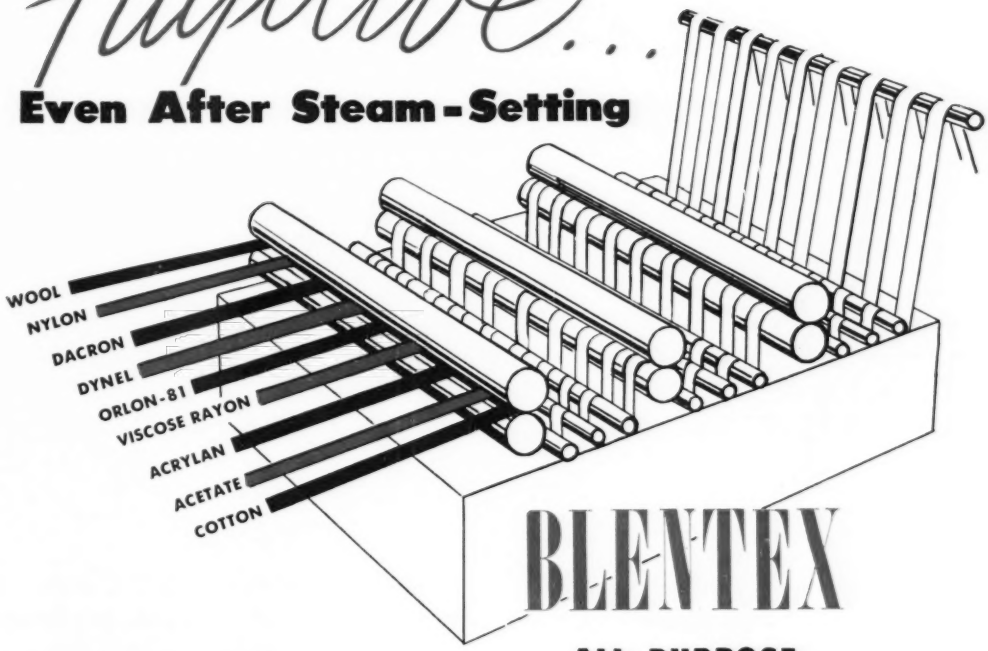
150th Anniversary

BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY

DU PONT FIBERS ARE PLANNED FOR BETTER LIVING

Fugitive...

Even After Steam-Setting



BLENTEX

ALL PURPOSE FUGITIVE TINTS

For Wool and Other Natural and Synthetic Fibers

Here is a major step forward in water soluble Fugitive Tints. BLENTEX TINTS have been laboratory and mill tested and are fugitive on Wool, Nylon, Dacron, Dynel, Orlon-81, Viscose Rayon, Acrylan, Acetate, and Cotton. They are fugitive for single fibers, blends, and filament yarns.

Blentex Tints may be sprayed on the loose stock in the opener. They may be applied to the sliver or roving by means of a marking wheel or similar device. They may be brushed on cones, quills, or bobbins.

Blentex Tints are readily fugitive under standard mill scouring treatments applied to the different types of fibers. They are even fugitive in wool yarns steam-treated for twist setting purposes prior to scouring.

Offered in 5 colors: red, yellow, blue, purple, and orange.

Write for free samples on your company letterhead.

UNITED STATES TESTING COMPANY, INC.

Established 1880

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ADDITIONAL

luster

MERPENOL

For All Fabric, Warp, and Skein Mercerizing

Merpenol is an efficient, economical liquid wetting agent for use in mercerizing solutions. In very small quantities it causes instantaneous wetting out and uniform penetration of the caustic liquor which results in a smooth round surface and added luster.

Quickly penetrating tightly woven and heavyweight fabrics, Merpenol leaves the fibers open and swelled for uniform dyeing and level shades. It avoids scum or sludge in caustic recovery systems because it dissolves immediately and completely in mercerizing baths.

It also may be used to advantage in alkaline detergent baths; as an auxiliary scour and penetrant for cotton in pressure or open kier boils; and in helping to remove Pectins. It is effective in removing graphite and lubricants when used on knitted goods before bleaching. When used with caustic alkalis in a box or jig, it acts as a scouring assist for rayon.

Additional information and samples of Merpenol will be supplied on request.

50th Anniversary

JACQUES WOLF & CO.

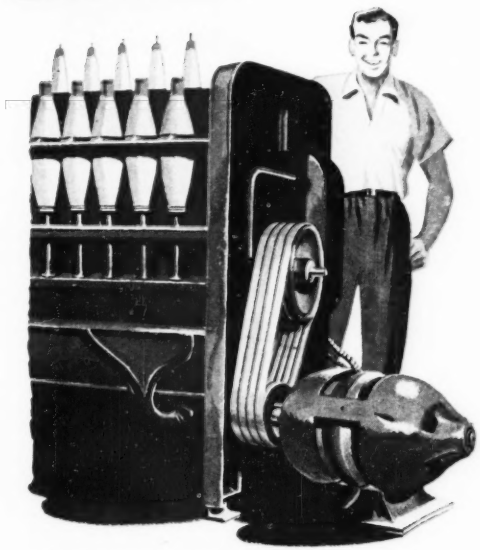
Chemicals PASSAIC, N. J.

Passaic, New Jersey Branches: Carlstadt, N. J. • Los Angeles, Calif.

You can better *every* V-Drive

with Goodyear's Line of Quality Belts

GOODYEAR INDUSTRIAL RUBBER PRODUCTS
GTM-Specified
TEXTILE SPECIAL V-BELT CONSTRUCTION
to handle uneven loads, small pulleys, short centers, possible misalignment
A Multiple-ply bias-cut fabric envelope minimizes surface wear
B Four-ply cord fabric strength member for elasticity and greater strength
C Gum cushion in compression section



FOR HOSE, FLAT BELTS, V-BELTS, MOLDED GOODS, PACKING, TANK LINING, RUBBER-COVERED ROLLS *built to the world's highest standard of quality, phone your nearest Goodyear Industrial Rubber Products Distributor.*

FOR every V-drive in your mill, there's ONE V-belt that's right—combining materials and design to handle drive requirements longest, and at the lowest cost in the long run. And the G.T.M. — Goodyear Technical Man — has developed the most complete line of V-belt constructions, each tailor-made to fit the job.

Ask your nearest Goodyear distributor — or the G.T.M. — about:

TEXTILE SPECIAL V-BELTS developed to cope with unavoidable misalignment of sheaves and other special textile drive problems.

COMPASS CONSTRUCTION E-C CORD for high speed drives with short centers and small pulleys.

MULTIPLE-PLY E-C CORD BELTS for larger, normal speed drives including those with heavy shock loads and severe starting conditions.

COMPASS-V-STEEL BELTS for maximum load capacity, high heat resistance, low power consumption and minimum space. Speeds from 10 to 10,000 FPM. In sizes up to 120".

STEEL CABLE V-BELTS for longer drives, belt length 120" and over, and heavy HP loads.

HY-T BELTS built with synthetic fibers — have nylon's strength without its stretch on severest heavy-duty drives; oil-resistant construction at no extra cost.

OPEN-END V-BELTING for line shaft drives, no take-up drives and dismantle-to-install drives; built to operate with and really hold metal fasteners.

FRACTIONAL HP BELTS for miscellaneous light machinery drives employing single belts.

One of these constructions will be the right answer to *your* V-drive problem — will give longer, more economical V-belt service in your mill. So ask the G.T.M. for details, or write:

Goodyear, Akron 16, Ohio.

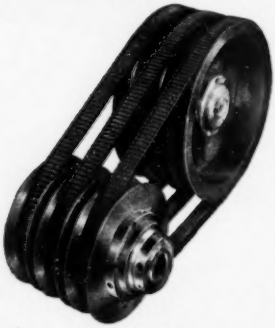
GOODYEAR

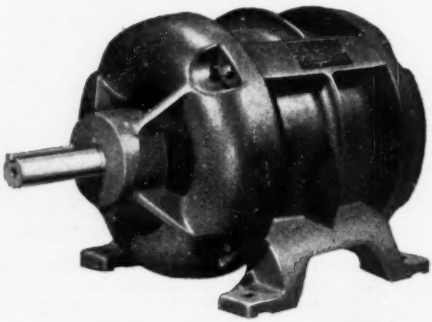
THE GREATEST NAME IN RUBBER

E-C Cord, Compass, Hy-T—T. M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

Built to Work

From Power Line to Machine





ALLIS-CHALMERS

TEXTILE DRIVES

YOU WILL SAVE MONEY by getting your complete machine drives from one dependable source. When you use Allis-Chalmers coordinated drive components, you can be sure that they will be installed easily and quickly and that they will work together to give you dependable service at lowest possible cost. One reliable manufacturer guarantees the satisfactory operation of your complete machine drive.

COMPETENT APPLICATION ENGINEERING

Allis-Chalmers application engineers, practical men with an intimate knowledge of the textile business, will help you select the best combination of motor, drive and control for your particular requirements.

If you are building a new mill or modernizing your old mill for higher speed operation and lower costs, discuss your drives with the Allis-Chalmers representative in your territory. He can help you plan for more profit. Allis-Chalmers, Milwaukee 1, Wisconsin. A-3708

Texrope, Quick-Clean and Vari-Pitch are Allis-Chalmers trademarks.

Allis-Chalmers Textile Specialists

are located in the following cities:

Atlanta, Georgia
Birmingham, Alabama
Boston, Massachusetts
Charlotte, North Carolina
Chattanooga, Tennessee
Dallas, Texas
New Orleans, Louisiana
Richmond, Virginia

Better Together

MOTOR CONTROL

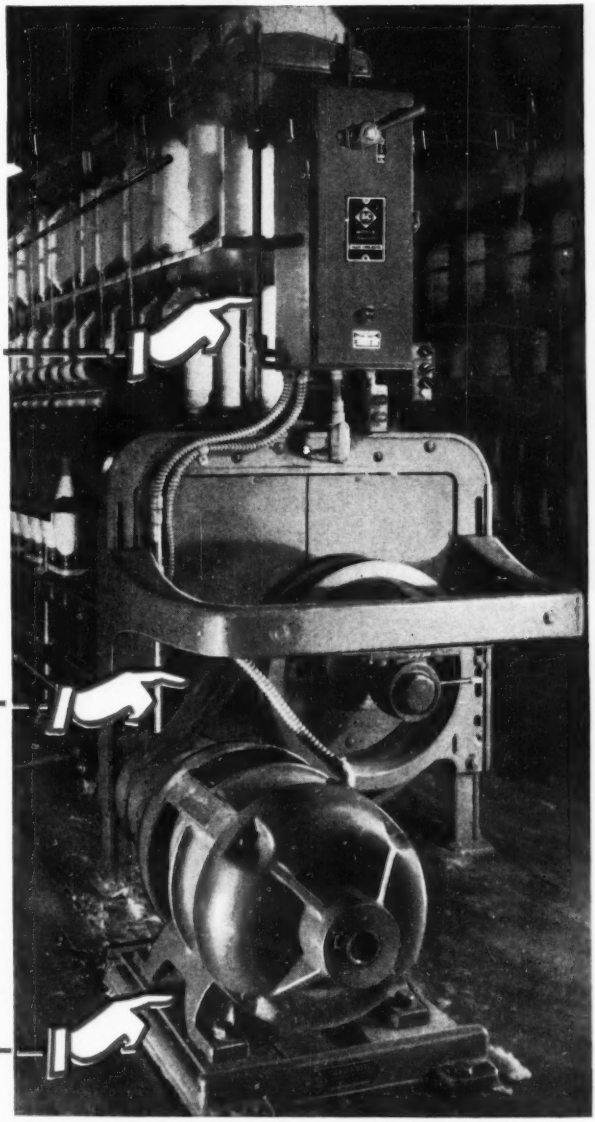
Standard types of textile motor control built to operate with Allis-Chalmers loom motors, *Quick-Clean* motors and all other Allis-Chalmers motors used in the textile industry. This is a full voltage AC magnetic starter with fusible disconnects which provides overload and undervoltage protection. Other starters are available for special service such as slow speed starters for card drives, loom switches and many other types preferred by textile mill operators. Enclosures may be lint-proof with interlocked cover handles for safety.

TEXROPE DRIVE

Texrope V-belt drives, the original multiple V-belt drives for textile machinery, are available in both fixed and variable speed types. More and more mills are finding that the moderate extra cost of *Vari-Pitch* sheaves comes back many times in increased machine versatility and more precise quality control as well as reduced down-time for change-overs. With either Stationary Control or Motion Control *Vari-Pitch* sheaves, speeds can be accurately adjusted quickly and easily. Wide Range *Vari-Pitch* Sheaves cover complete operating range of most machines with one drive.

TEXTILE MOTOR

Quick-Clean motors are of special wide-open design which cannot trap lint, overheat and burn out. Powerful fans sweep lint-laden air into the motor and right out again through large, unobstructed ventilating openings. All internal air passages are smooth, hard and streamlined so that lint cannot lodge. *Quick-Clean* motors are built with special acceleration and torque characteristics to meet special requirement of roving frames, cards and other machines. A special totally-enclosed, non-ventilated loom motor also is available.

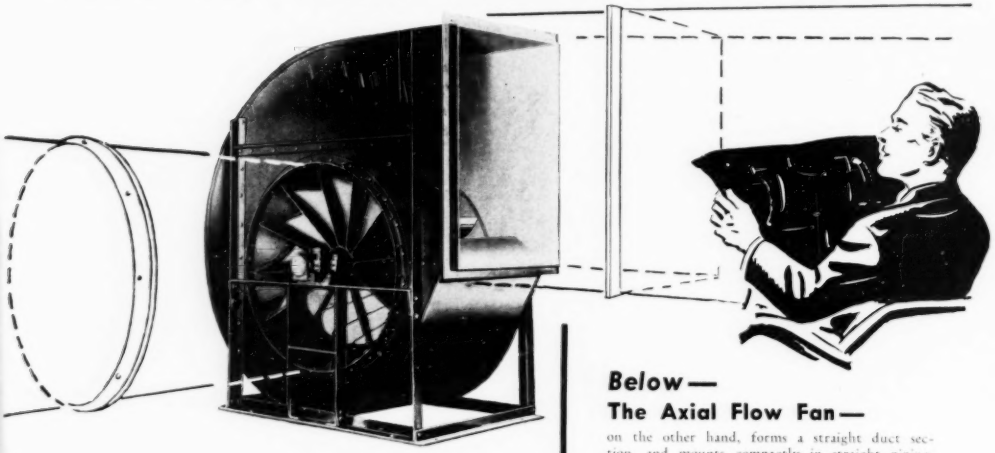


ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry

"Buffalo" *Tips on Getting the Best Service from your* **Fans**

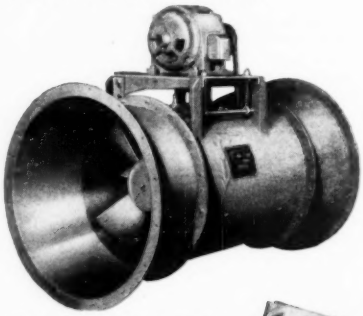
PICK THE FAN TO SUIT THE PLAN!



The CENTRIFUGAL FAN
Is a Built-in 90° Elbow

Since air leaves the centrifugal fan in a direction vertical to that of the entering air, the logical location of the fan is where a 90° turn in the duct is planned. This takes advantage of the natural right-angle change in direction of the air and does not sacrifice efficiency, as in forcing air through an ordinary elbow. "Buffalo" Limit-Load centrifugal fans like the one shown above have features for additional efficiency and quiet, such as double backward curve blades, directional inlet vanes, specially shaped housing and dynamically balanced wheels. Medium speed fans, they are ideal for handling large volumes of air at medium pressures. They have the additional advantage of being non-overloading, regardless of system pressure.

Below—
The Axial Flow Fan—
on the other hand, forms a straight duct section, and mounts compactly in straight piping. For complete information on "Buffalo" Axial Flow Fans, write for Bulletin 3533-C.



TO HELP YOU SELECT THE RIGHT FAN—

Bulletin 3737 gives construction and performance data on "Buffalo" Limit-Load Fans. WRITE FOR YOUR COPY.

FIRST FOR FANS

BUFFALO FORGE COMPANY

175 MORTIMER ST. BUFFALO, NEW YORK

PUBLISHERS OF "FAN ENGINEERING" HANDBOOK

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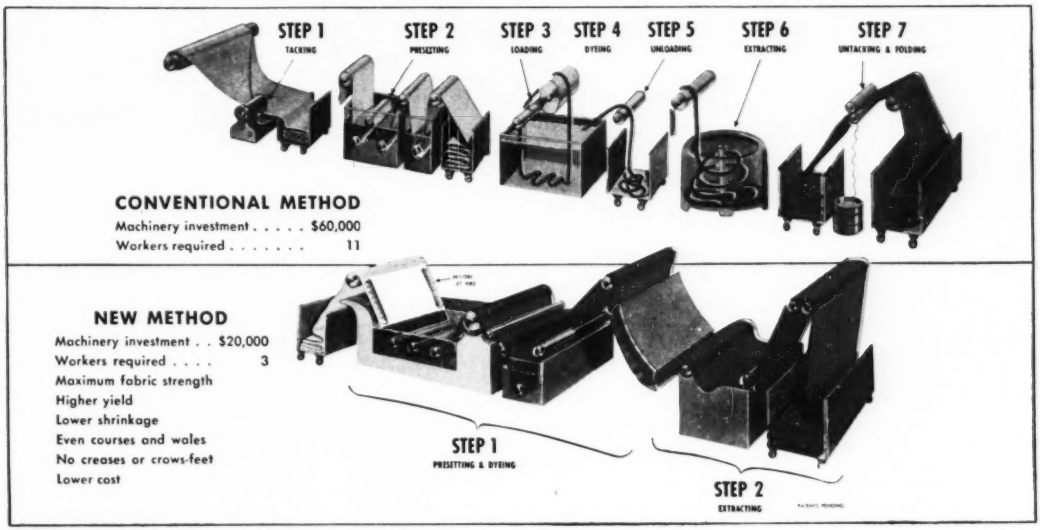
VENTILATING FORCED DRAFT | AIR CLEANING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT PRESSURE BLOWING | EXHAUSTING

New Avisco continuous dyeing process for Acetate Tricot steps up quality...lowers costs



A new simplified method proposed for dyeing acetate tricot (see flow chart above) developed by Avisco greatly improves fabric quality, reduces shrinkage and lowers costs. The Avisco system presets and dyes the fabric in open-width form, thereby eliminating the necessity for tacking and untacking.The results achieved from this method as compared to dyeing in the conventional rope form, indicate that fabric strength is increased by at least 10%. The shrinkage is better and the yield is greater.

The new process is the result of research conducted at Avisco's Textile Research Department. Complete technical information, licensing data, etc. will be gladly furnished on request.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

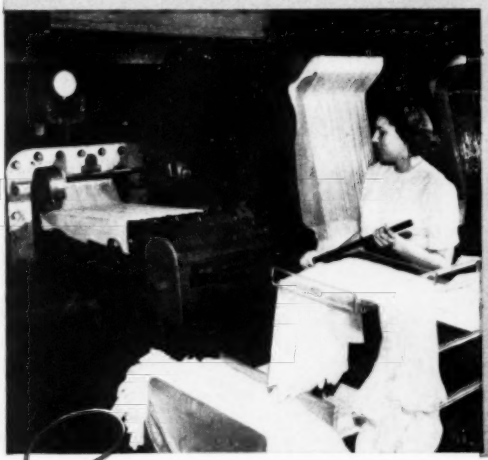
1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

AMERICAN VISCOSE CORPORATION

World's largest producer of man-made fibers

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

Removing a set of Stainless Steel forms from the steam retort in Real Silk's Pre-boarding department. These forms have been in service 16 hours a day, five days a week for 13 years.



Stainless Steel forms in the finished boarding department are heated internally by steam. These units have been in service since 1941 without replacement.

Smooth Stainless Steel forms keep Realsilk brand hosiery "snag-free"... and they've lasted 13 years

● Snagging is as much a problem to the hosiery mill as it is to the wearer. That's an important reason why Real Silk Hosiery Mills, Inc., Indianapolis, Ind., finds Stainless Steel the best material for stocking forms.

Stainless Steel's smooth surface *stays* smooth and hard, preventing snags and pulled threads. Stainless is easy to keep clean, too, and retains its "like-new" appearance.

Long life is important, also, and here again Stainless Steel fills the bill. In the pre-boarding department, where undyed stockings are set in a steam retort, nineteen 48-board units have been in service since 1938 and 1939 without replacement. In finished boarding, where stockings are set into final shape on internally steamheated forms, forty-seven 12-board units have been in service for ten years without replacement.

Stainless Steel's long service life, its kindness to the product, its high corrosion resistance and its low maintenance and replacement costs make it essential to almost every part of the textile production line. Although some grades are in short supply today, it's time to plan for increased efficiency with U·S·S Stainless Steel.

"Stainless Steel forms . . . are the finest obtainable"

S. J. Gatchell, superintendent of Real Silk's Hosiery Division, says, "We believe the Stainless Steel forms used in our pre-boarding and boarding departments are the finest obtainable. They are very durable and have a very smooth finish. These Stainless forms are very easy to keep clean and look like new after many years of service."

U·S·S STAINLESS STEEL

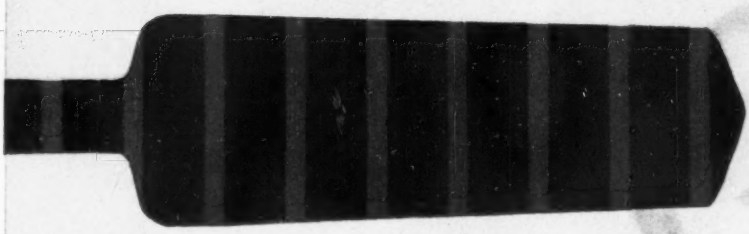
2-107

USS

UNITED STATES STEEL COMPANY

AMERICAN STEEL & WIRE . . . . COLUMBIA-GENEVA STEEL . . . . NATIONAL TUBE . . . . TENNESSEE COAL & IRON
UNITED STATES STEEL SUPPLY, WAREHOUSE DISTRIBUTORS . . . . Division of UNITED STATES STEEL COMPANY, PITTSBURGH
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

*ARIPERM pm®



Your reputation won't fade... if your acetate fabrics don't!

***ARIPERM PM® Prevents Gas Fading**

When colors fade, so does consumer confidence in the manufacturer's label: this "backs up", eventually, to the dyehouse. There's no need for this with fabrics (partially or wholly) of ACETATE RAYON, for *they can be given protection against fading from atmospheric gases. ARIPERM P M does the job.* Its durability means exceptional protection through washing and dry cleaning.

ARIPERM P M is especially valuable for dyeing Light Shades, Pastels and Tints, since it does not throw the shade over to the yellow. Application is simple, in scouring or directly in the dyebath. Write for details, sample, demonstration.

Arkansas Co. INC.

MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS
NEWARK, NEW JERSEY

Arkansas Co., Inc.
184 Foundry St.
Newark, N. J.

Gentlemen:
I would like to have, without obligation:

- ☐ full details of ARIPERM P M benefits
- ☐ sample and application procedure
- ☐ demonstration in plant

NAME _____ TITLE _____

FIRM NAME _____

ADDRESS _____

CITY _____ STATE _____

3-5-2

STAYS WHITER because it STARTS WHITER!

INTERIOR SURFACES STAY CLEANER . . LONGER . . WITH KEM SAVE-LITE . . THE WHITER WHITE!

How long white paint *stays* white—and *how* white it stays—depends, in part, on *how white it is to start with.*

Sherwin-Williams KEM SAVE-LITE Finishes for mill interiors cut upkeep costs because their brilliant whiteness both starts higher and stays higher in light reflection value. These facts are borne out not only in laboratory tests, but in year-after-year experience in leading textile mills the country over.

Test KEM SAVE-LITE for yourself against any conventional mill white finish. See the difference—in initial whiteness—in hiding power—in greater covering capacity. Call your Sherwin-Williams representative for a demonstration, or write The Sherwin-Williams Co., Cleveland 1, Ohio. (Division office, Charlotte, N. C.)

Types to Meet Varying Requirements

Sherwin-Williams Save-Lite is supplied in several types to meet varying operating conditions, both in oil type (Save-Lite) and synthetic (Kem Save-Lite). Gloss finish gives extreme ease of cleaning; Eg-Shel greatest diffusion and reflection of light. Fume and moisture-resisting types give added resistance where chemical fumes, moisture and heat are encountered.

SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES

MILL VILLAGE PAINTS

COLOR SELLS TEXTILES
Quality KEEPS THEM SOLD
Science says that color is a psychological force. As any sales person knows, it can draw customers toward your product — or drive them away.
Our colors are planned to appeal, quality-made to "keep sold". And they're backed by the largest dyeing organization in the world, with more than 40 years of experience at producing colors that sell fabrics.
Franklin Process
LARGEST PACKAGE DYERS IN THE WORLD
Providence • Philadelphia
Greenville • Chattanooga
New York Representative: 40 Worth Street

The COLOR they see in the windows today... should be COLOR that's dyed into fabrics to stay!

DU PONT VAT DYES give customers the kind of color performance they *expect* from a fabric nowadays—all-round fastness to laundering, sun, perspiration and dry cleaning. The color *lasts* for the life of the fabric!

Dress materials are just one application for Du Pont PONSOL* and LEUCOSOL* (anthraquinone-type dyes) and SULFANTHRENE* (indigoid and related dyes). Our technical staff will be glad to work with you in your choice and application of these uniform, deep-penetrating vat colors. E. I. du Pont de Nemours & Co. (Inc.), Dyestuffs Div., Wilmington 98, Del.

*REG. U. S. PAT. OFF.

ALWAYS DYE WITH AN EYE TO THE END USE.

DU PONT
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Du Pont Dyestuffs

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

Sturdy Gaylord Boxes

Deliver Your Product Safe and Sound

It's the unseen quality that gives you the extra margin of safety in

Gaylord Boxes

Manufacturers who know the sales value and economy of safer arrival of their products prefer Gaylord Boxes.

Tough enough to take the roughest kind of handling, these protective containers stand between your product and possible damage in shipping.

Ask the Gaylord Sales and Service office nearest you for proof of the advantages of Gaylord Boxes engineered to your specific needs.

GAYLORD CONTAINER CORPORATION

General Offices: ST. LOUIS

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No Simple Task

THE SUCCESSFUL functioning of any machinery maintenance system, wherever it may be applied, depends on *how* the job of lubrication is done. Oiling and greasing must not be considered a simple task, for facts prove that the effects can be of major proportion. Analyzing the lubricant needs of the many types of machinery regarding loads, speed and atmospheric conditions, is a necessary part of an established maintenance program. Acceptance of products should be based on rigid performance tests. It has been the practice of Standard Oil to keep abreast with new developments and the needs of the textile industry, and develop from specially selected crudes, lubricants which are carefully distilled and processed to resist oxidation, gumming and wear to the highest degree. For assurance of efficient lubrication, consult one of our representatives. Remember—the combined facilities for research, testing and engineering behind the line of industrial lubricants he offers, are unequalled.

Standard Oil Company
(KENTUCKY)

STANDARD OIL
LUBRICANTS

Call SOLVAY First

TRADE MARK REG. U. S. PAT. OFF.

For These Textile Chemicals

SODA ASH
CAUSTIC SODA
LIQUID CHLORINE
SODIUM NITRITE
POTASSIUM CARBONATE
NYTRON*

Because . . . Solvay textile chemicals are uniform, fine quality products . . . BECAUSE Solvay's *exclusive textile* Technical Service offers valuable assistance on the proper use of these chemicals in your operations . . . BECAUSE Solvay's thirteen sales offices and nation-wide organization of distributors is ready to serve you promptly and courteously . . . BECAUSE you get fast, dependable delivery service from Solvay's convenient plants and more than 200 stock points.

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Since 1881

Caustic Potash • Chlorine
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* Reg. U. S. Pat. Off.

Get Longer Apron Life, Lower Maintenance Costs . . .

with BULL DOG RUB APRONS

Because Bull Dog Rub Aprons are made of a patented, specially formulated synthetic material . . . a material that is stronger and more durable than is to be found in other rub aprons . . . Bull Dogs last longer.

And, because this material has a higher coefficient of friction, you can run Bull Dogs up to 30% slower where only ordinary rubbing is required . . . an added boost to longer apron life . . . and a real advantage to longer condenser life and lower maintenance costs.

What's more, Bull Dog Rub Aprons permit increased card condenser production up to 25% or more and they increase jack-spool capacity 40-50% by weight which results in lower handling charges and longer runs.

For the full story of these and many other advantages you will enjoy with Bull Dog Rub Aprons in your mill, get in touch with your local distributor, or write direct.

Another Quality Product of

BOSTON WOVEN HOSE & RUBBER COMPANY

Warehouse Stock: 111 N. Canal St., Chicago, Illinois **Distributors in all Principal Cities**

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BWH
DEPENDABLE RUGGEDNESS

Yarn Carriers, too, are Capital Equipment

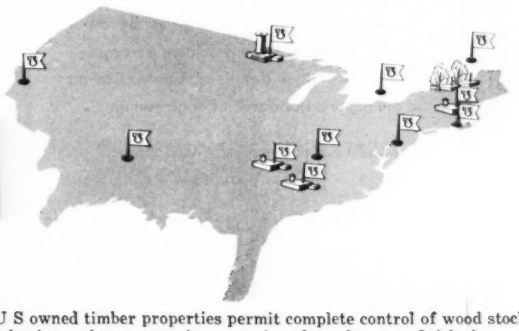
Suppose all the bobbins you buy in a year were delivered as one giant bobbin . . . and the same for all the shuttles.

You could easily see, then, why they should be classed as capital equipment. In some mills, the annual cost for yarn carriers runs to $80,000. And even in moderate sized mills, it can total more than is paid for major units of processing machinery.

You could see, also, why carriers should be bought with the same sharp eye to quality and performance that you would apply in a machinery purchase.

No mill man would knowingly handicap processing operations with yarn carriers that fail to measure up to performance standards. But he takes that chance when carriers are carelessly chosen because their *low individual cost* does not seem to warrant top management's attention.

You can be sure you are investing in products of proved efficiency and endurance when you specify U S Bobbins and Shuttles. Talk to a U S sales representative. You'll find him fully prepared to help you get better yarn and fabric quality, and lower operating costs.



U S owned timber properties permit complete control of wood stock selection and every step in processing, from forest to finished products. Five manufacturing plants, North and South, provide ample facilities to produce and deliver promptly the cost-saving yarn carriers you need, in any quantity.

Anywhere in textile America, you are near the headquarters of a U S specialist in yarn carrier selection. He'll call at your request.

U S BOBBIN & SHUTTLE CO.

LAWRENCE, MASS. PROVIDENCE, R. I. PHILADELPHIA, PA.
JOHNSON CITY, TENN. GREENVILLE, S. C. CHARLOTTE, N. C.
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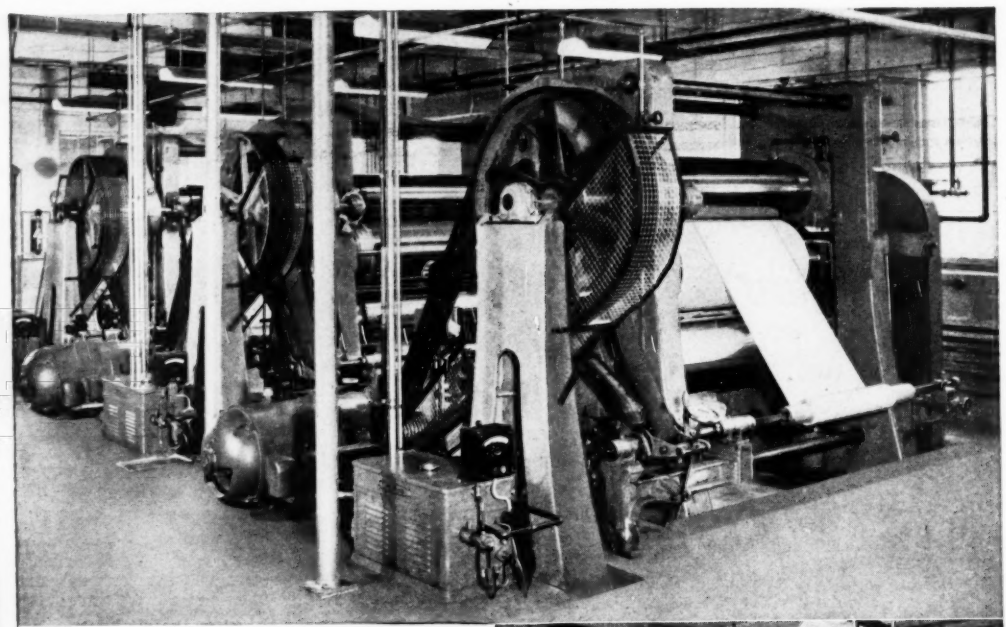
LOS ANGELES: E. G. Paules, 1762 W. Vernon Ave.
DALLAS: O. T. Daniel, Textile Supply Co.
CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.



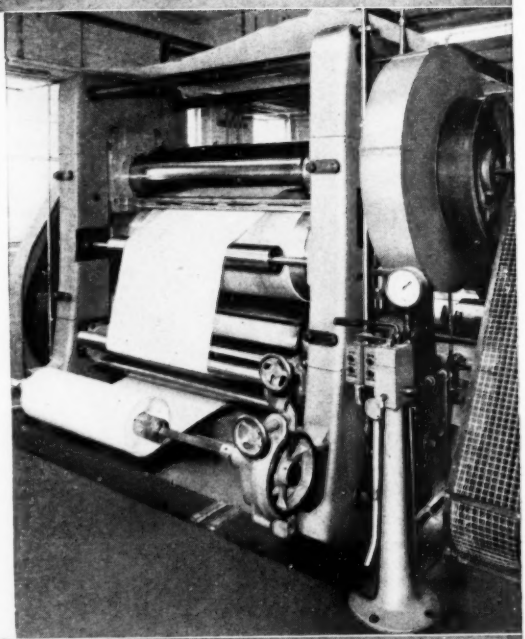
Customer's Verdict

"Friction calender of the year"

"Smoothest running friction calender ever built"

Battery of three Perkins Friction Calenders incorporating new and proven ideas which contribute to smooth operation and high efficiency; roller bearings leakproof for life-time—seals eliminated; hydraulic equipment with built-in accumulator, self-contained in compact housing; friction drive by chain, easily adjustable for any friction percentage desired; all other details of construction up to the highest standards of engineering.

CLEANLINESS SMOOTHNESS
NOISELESSNESS



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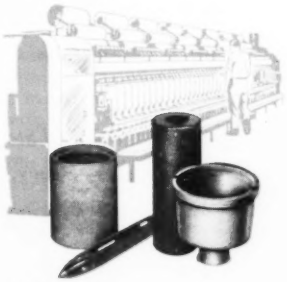
LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

micarta is basic!

In vital places in the textile industry



TEXTILE INDUSTRY

Bobbins, shuttles, spools and lap rolls are typical of MICARTA products which are vital elements in textile production. Its tough, light, long-wearing qualities offer infinite possibilities in the growing textile industry.

MICARTA® helps keep key machines productive. It is a basic material . . . a versatile plastic which outlasts metal and wood in many punishing applications. Bobbins, shuttles, spools and lap rolls are only a few of the many MICARTA products paying their way in your industry.

MICARTA safeguards yarns and fabrics. It won't chip or splinter. It wears evenly and smoothly, absorbs shock and vibration, resists heat and cold.

This lighter-than-aluminum material can be machined, formed or molded easier and more economically than metal. Protect your vital applications with MICARTA. Westinghouse Electric Corporation, MICARTA Division, Trafford, Pennsylvania. J-06448-A

tomorrow's production

with yesteryear's frames?

THE SIXTY-FOUR DOLLAR QUESTION confronting many mills is "How can we make our yarn output competitive . . . in quality, quantity, and cost . . . and still utilize our old band-driven or old-style tape-driven frames?"

Scores of mills have found a profitable and highly satisfactory answer to this question in "Meadows Modernizers" . . . individual drive pulleys, ball bearing tape tension pulleys—that assure even tension at all times—a more uniform speed and twist—fewer ends down.

If it's changing from band to tape-drive . . . cutting and lengthening frames . . . replacing troublesome cylinders on long tape-driven frames, or even changing the gauge and ring size . . . or merely accessories such as tension pulleys, separator shields, saddles, etc.—consult us before making final decision, and let us give you the benefit of our experience along this line.

Ball Bearing Tension Pulleys

•

Individual Drive Pulleys

•

Aluminum Alloy Separators

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Silent Chain Drive

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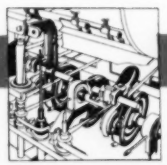
High-Strength Polished Steel Shafting, mounted on Heavy Duty Self-aligning Ball Bearings



MEADOWS CONVERSIONS

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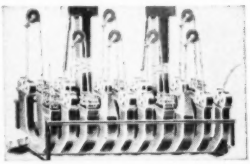
For further useful information use Helpful Booklet Card—TEXTILE INDUSTRIES • MAY, 1952

Du Pont Bleachery Survey Helps Mill Reduce Rejects

TOP BLEACHING ECONOMY



FOR SMALLER BLEACHERIES

Where production does not warrant a full-size continuous bleaching range, the Butterworth-Du Pont "Junior" Unit produces low-cost, quality results. With a rated capacity of 500 to 1000 lbs. per hour, the "Junior" unit meets space and production requirements of smaller mills. And large mills can use it as an economical auxiliary unit for specialty bleaching.

Compact in size, the "Junior" unit is a *complete* bleaching range designed on the principles of Du Pont Continuous Peroxide Bleach. Write in for complete information to: E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Dept., Wilmington 98, Delaware.

Poor whiteness and whiteness retention were causing a high percentage of rejects. Du Pont technical representatives, working closely with the mill operators, discovered the source of the trouble—bleaching and scouring baths were improperly formulated . . . final washing was inadequate. Laboratory tests confirmed these findings. As a result, adjustments were made in bath concentrations, and storage time in J-box was extended. Now, without increasing final washing, the mill has reduced rejects to a minimum—*and is producing top-quality cloth with substantially less bleaching and scouring chemicals!*

A bleachery survey can help you increase production . . . cut costs

HERE'S WHAT WE DO:

- Study your processing techniques—steam, water and chemical consumption, cloth production and quality of finished goods.
- Analyze samples of your cloth for whiteness, whiteness retention, fluidity, absorbency and non-fiber content.
- Evaluate all data in the light of Du Pont's broad experience in textile bleaching.

HERE'S WHAT YOU GET:

- Valuable, on-the-spot suggestions for improving your processing techniques.
- A written report on the efficiency of your bleaching operation, which includes detailed suggestions on how you can increase production, cut costs and improve the quality of finished goods.

DU PONT BLEACHERY SURVEYS are conducted by technical men with wide experience in all phases of textile bleaching. These men spend from one to three days in your plant but do not interfere with production. This service is offered without charge to all users of peroxide in the United States. Send in the coupon below for complete information.

DU PONT PEROXIDES

FOR TEXTILE BLEACHING

Available in drums and tank cars { "Albone" 35 . . . Hydrogen Peroxide, 35% / "Albone" 50 . . . Hydrogen Peroxide, 50%

DU PONT 150th Anniversary

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Delaware

Please send me more information about the free Du Pont Bleachery Survey. I am bleaching____cotton____wool____man-made fibers.

Name_____ Title_____

Firm_____

Street & No._____

City_____ State_____

Ever since you were knee-high to a hop-toad, you've heard about America's wonderful *natural resources*—the bountiful fertile fields, the towering timber growth, the boundless water power, and the untold wealth of gold, iron, oil, silver, coal and other natural treasures that lie buried in the ground.

Is it because America has *more* natural resources than any other country that Americans enjoy the world's highest standard of living? No—many countries have as much—some have more.

Then is it because Americans *do* more with what they've got?

Yes! And the reason is as plain as the nose on your face. It's because Americans are free to develop their natural resources—and their natural resourcefulness—in the wholesome climate of *open and strenuous COMPETITION.*

COMPETITION—not "regimentation"—is what eggs a man on to do his best.

COMPETITION—not government control—is what urges a business to give its customers ever greater value for their money.

So let's say "NO SALE" to the *ism* peddlers who would have us swap our U. S. A. system of free competition for their "planned" regimentation—trade our U. S. A. freedom and plenty for their serfdom and poverty!

* * *

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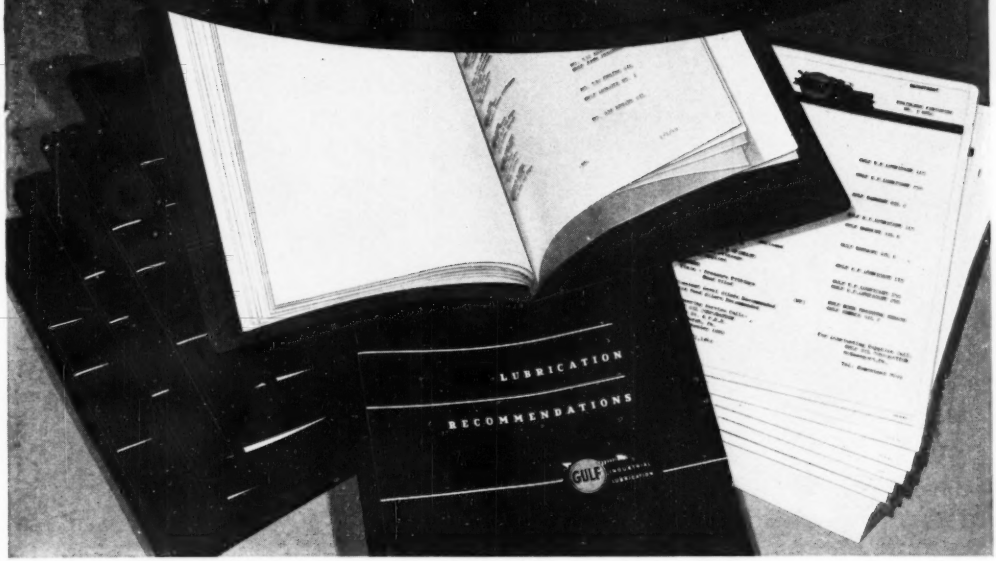
THE COMPETITIVE SYSTEM DELIVERS THE MOST TO THE GREATEST NUMBER

NUMBER 3 OF A SERIES

How Gulf Periodic Consultation Service helps textile mills cut lubrication and maintenance costs

PRACTICAL SIMPLIFIED LUBRICATION CHARTS PROVIDED



A logical source of information and help on any problem that involves lubricants or lubrication is a trained Gulf Lubrication Engineer. You'll find he does more than simply recommend the proper oils and greases for every type of equipment in your mill. He offers effective help on every phase of lubrication!

After he has completed a survey of your plant equipment and operating conditions, for example, he will offer two types of lubrication aids. The first, a master lubrication chart in book form which is to be retained in the maintenance office, contains an itemized list of all your equipment together with recommended Gulf lubricants and the methods of application. The second, a group of plastic bound wall charts, is provided for each department or section. These durable charts are used in the department or section to which they apply.

This system has proved to be very practical without being cumbersome—the oilers have a permanent, convenient reference chart near the point of lubricant application, and their supervisors have an effective means of controlling the overall picture and of checking such factors as number of different lubricants in use.

This is just one phase of the plan known as Gulf Periodic Consultation Service. For additional information and for expert help on any specific lubrication problem, call in a Gulf Lubrication Engineer today.

GULF SERVES INDUSTRY

Gulf Oil Corporation · Gulf Refining Company

719 Gulf Building, Pittsburgh 30, Pa. TI

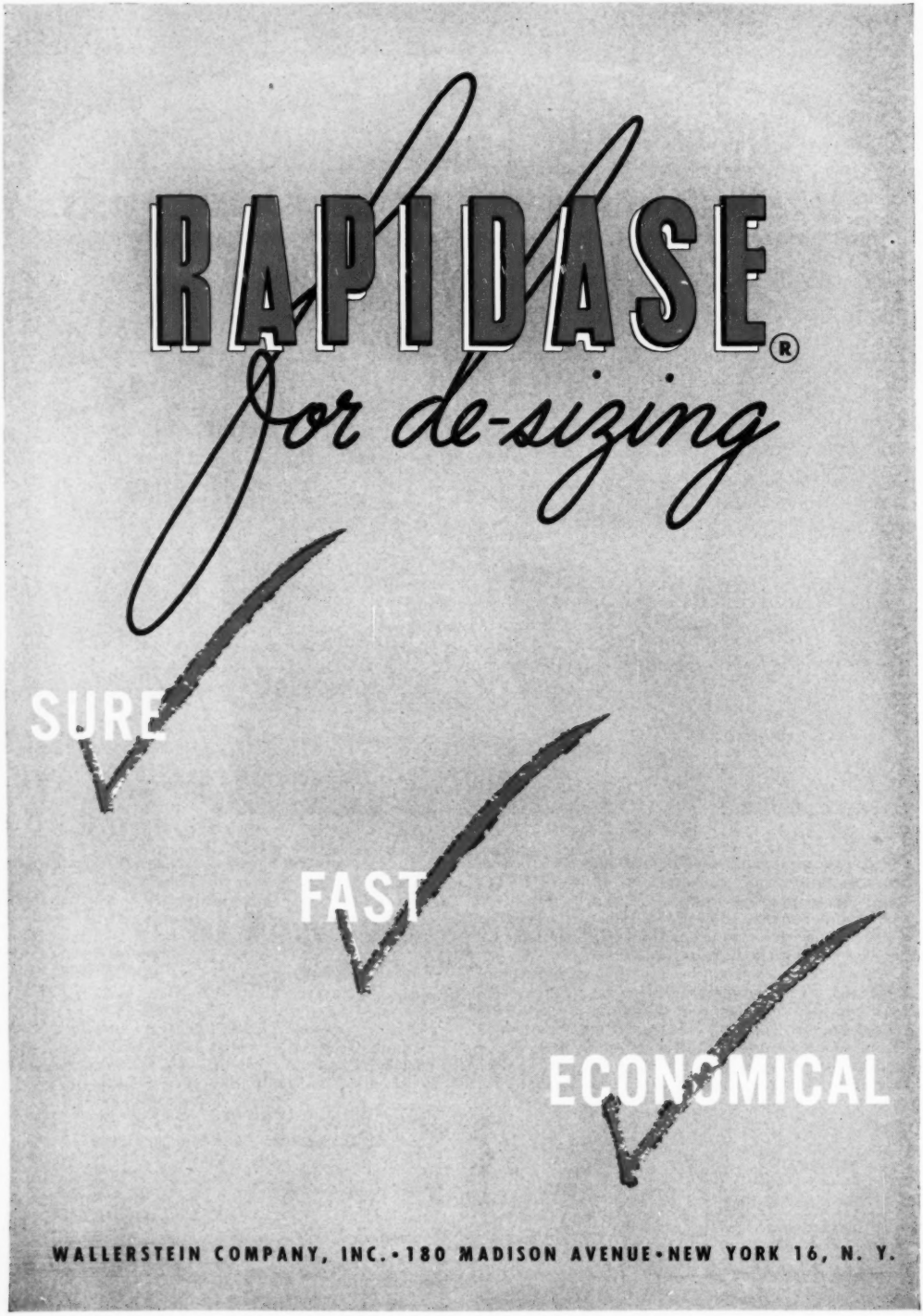
Please send me, without obligation, a copy of the booklet "Gulf Periodic Consultation Service."

Name.....

Company.....

Title.....

Address.....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FAST
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WALLERSTEIN COMPANY, INC. • 180 MADISON AVENUE • NEW YORK 16, N. Y.

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...Woven on a Brilliant Instrument!

Fabric designers and weaving mills can really "reach the top of their form" on high-speed C&K Call-Box Looms . . . the most widely versatile, quickly convertible looms built in the world today.

On these amazing weaving instruments, individual ideas and creative gifts find fuller scope for magnificent expression . . . in patterned silks, rayons, synthetics, blends, woolens, worsteds, carpetings, narrow fabrics . . . or what new idea have *you* in mind on which to build a spectacular merchandising triumph . . . another outstanding "personal success."

C&K can help you to develop your theme . . . to score it for its richest tones . . . and to produce it for top "box-office appeal" . . . any time you say. Just write.

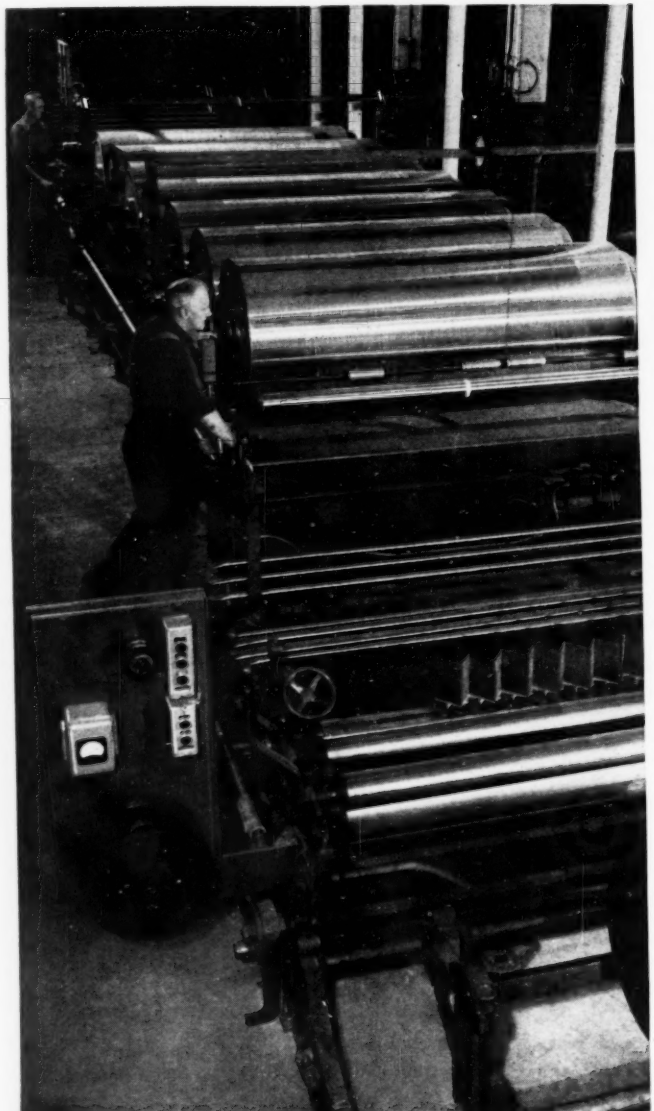
This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

NEW PACKAGED G-E SLASHER DRIVE WINDS MORE YARN PER BEAM



Automatically-controlled warp tension is maintained on this slasher by a G-E packaged slasher drive (control panel in foreground). Soft spots in the beam are reduced and yarn elasticity kept high.

Compact, flexible drive also cuts yarn breaks at large Eastern mill

A new General Electric packaged slasher drive was recently installed at Mohawk Carpet Mills, Amsterdam, N. Y., to size carpet-backing yarn. In this new drive, G-E adjustable-voltage d-c speed control is combined with G-E amplidyne tension control in a single, simple "package." Already the new drive has proven itself—in more yardage on the beam, fewer ends down at the loom!

COSTS LESS—THREE WAYS!

Low first cost: Mass-produced parts reduce unit price.

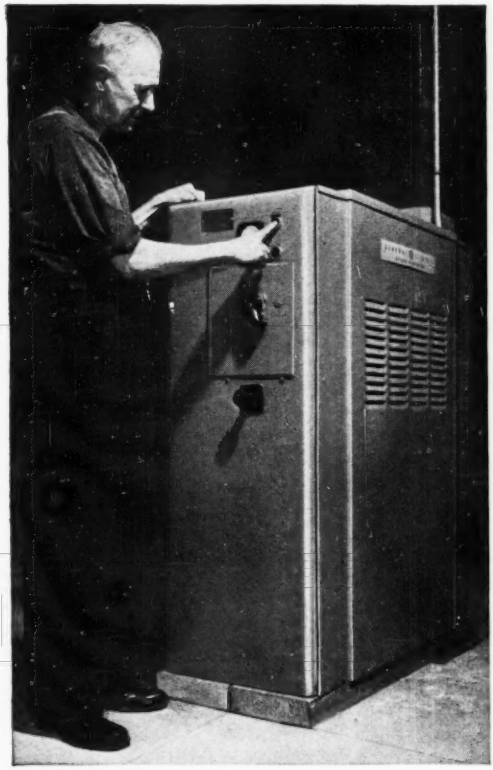
Low maintenance cost: Filters keep lint out of power unit; all parts are easily accessible.

Low installation cost: Just set the power pack in place and run in the conduit—costly interwiring is eliminated, space saved.

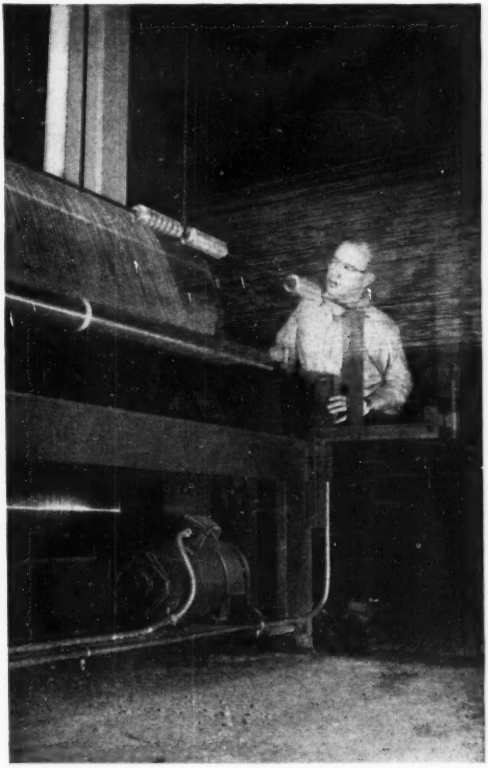
Like to learn more? Call in your G-E Textile Mill specialist. *General Electric Co., Schenectady 5, N. Y.*

PACKAGED SLASHER DRIVES FOR TEXTILE MILLS

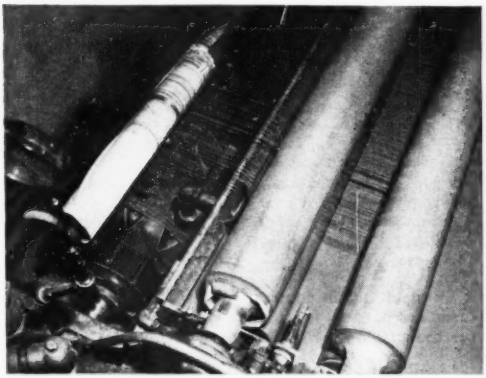
Motor "know-how" for your workers! General Electric's new Motor Selection and Application Course, an easy-to-understand visual program, can help you keep your electric equipment at top efficiency. Shows how motors work, types in use, how to select and apply them. Write for Bulletin GEA-4938-16.



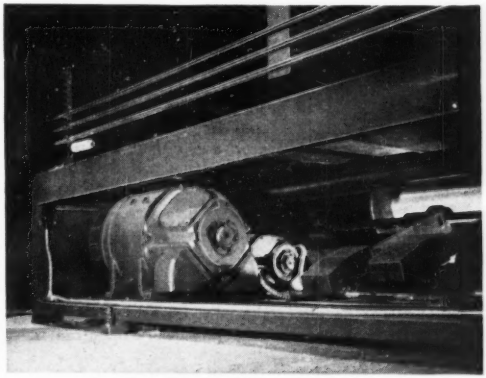
1 **Compact power "package"** contains G-E motor-generator set, amplidyne, booster, exciter, and control panel—needs no special foundation. It supplies d-c power for 4 slasher-drive motors.



2 **Conveniently-located** "Fast-Slow-Stop" push-button station at operator's left is one of several for controlling speed of the entire slasher. Motor shown at bottom is a 3-hp splashproof G-E gear-motor.



3 **Completely protected** against size, this 3-hp totally-enclosed G-E gear-motor (left of size box) drives size box rolls. Speed can be adjusted to stretch or shrink yarn between size box and dryer cylinders.

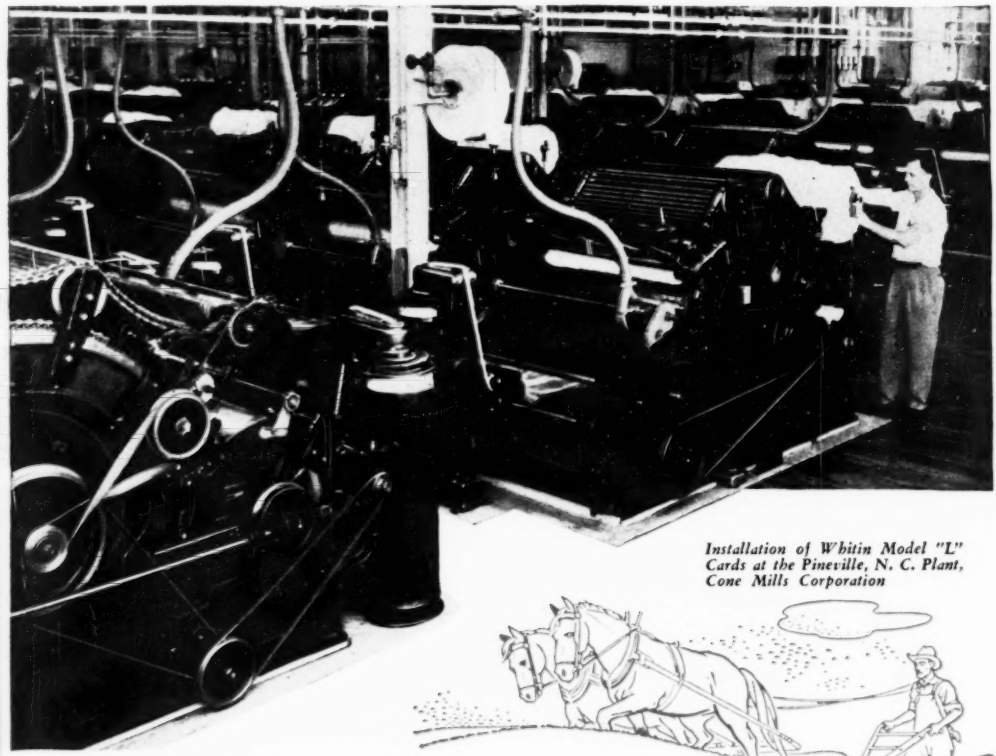


4 **Tension stays constant** as beam builds up—7½-hp splashproof G-E gear-motor changes beam roll speed in response to amplidyne. The 5-hp delivery-roll motor, right, permits desired beaming tension.

GENERAL ELECTRIC

654-23

The WHITIN Model "L" Card . .



Installation of Whitin Model "L" Cards at the Pineville, N. C. Plant, Cone Mills Corporation

the workhorse of your card room

You can depend on Whitin Model "L" Cards to give you years of trouble-free, efficient operation. They're built to "take it." Day in and day out, they continue to deliver peak production and better quality with extremely low maintenance costs. Truly the Model "L" can be called the "workhorse of your card room."

The newly developed *steel top flats,* which are now standard equipment on the Model "L", give greater rigidity, closer and better holding of settings, reduction in variation and more uniform sliver.

Outstanding among the many special features which contribute to more profitable, all-around operation are:

- **Structural improvements in the framework, cylinder bearing pedestals, and arches insure that all the settings can be easily made and accurately held for long periods of time.**
- **Cut gearing for quiet operation.**
- **Oilite bearings in many locations for more efficient lubrication.**
- **Improved feed plate and feed roll weighting arrangement.**
- **Restyled surfaces and contours for easier cleaning and adjusting.**

If conditions in your card room indicate that new cards are needed, it will pay you to investigate the performance of the Whitin Model "L" Card.

Write today for our illustrated folder giving complete details and technical data.

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

VOGUE says

Pink

—new colour note

Sandoz offers the right combinations for your production of the **new pink** *shades . . .*

FOR SILK OR WOOL

Xylene Fast Red P
and the newly announced
Xylene Fast Bordeaux P

These colors have unusual fastness to light with superior fastness to washing, water, and perspiration.

FOR SPUN RAYON

Pyrazol Fast Rubine BLN
and
Pyrazol Fast Orange 4G

For spun rayon dress fabrics which will be anti-creased, these colors provide maximum fastness to light, perspiration, and washing.

You can depend on Sandoz to provide the best colors to meet your specified requirements.

For forecast colors as well as perennial favorites for both natural and synthetic fibers, select from the Sandoz line of chrome, acid, acetate, direct dyes and auxiliary chemicals—detergents, dyeing assistants, finishes.

SANDOZ

thinks ahead with textiles

SANDOZ

SANDOZ CHEMICAL WORKS, INC., 61 Van Dam Street, New York 13, N. Y. Sales Offices: Boston, Providence, Fairlawn, N. J., Philadelphia, Charlotte, Chicago, Los Angeles, Montreal, Toronto.

Three Products that Solve Three Problems

on wool, cotton, and man-made fibers

- *scouring*
- *dispersing dyestuffs*
- *wetting out*

Sandopan TN

scouring efficiently alone
or in combination
with soap or alkali . . .
excellent in scouring, boil-off,
kier boil, and for soaping-off,
vats, and naphthols

Sandopan TFL

disperses dyestuffs and
simultaneously prevents
the formation of dye specks . . .
eliminates crack marks
during dyeing

Sandozol N

for instantaneous and even
wetting from 70° F to 200° F
offers fastest way to move
goods from the loom to the
finishing department

These Sandoz products can be used singly or in combination.

Send for your copies
of these new Sandoz booklets:

SANDOPAN TN
SANDOPAN TFL
SANDOZOL N

SANDOZ Chemical Works, Inc., 61 Van Dam Street, New York 13, N. Y. *Sales Offices:* Boston, Providence, Fairlawn, N. J., Philadelphia, Charlotte, Chicago, Los Angeles, Montreal, Toronto.

SANDOZ *thinks ahead with textiles*

SANDOZ

Smooth out your looms, cut your down time...

with this extra long-life check strap

Gates patented Multi-Check Strap

OLD STYLE STRAPS

The shock is concentrated here

FIG. 1

Strap must stretch to conform to picker stick angle . . . and it keeps on stretching

FIG. 2

Since a picker stick is slanting as it strikes a check strap, the *top edge* of an ordinary *one-piece* check strap takes the full force of the blow (See Fig. 1). The strap stretches to *conform to the angle of the picker stick.* (See Fig. 2). This means frequent adjustment—valuable production time lost. And as the strap stretches it loses resiliency, making a really smooth check impossible.

To solve this problem Gates Textile Engineers developed the endless MULTI-CHECK STRAP. It consists of four separate bands, each moving independently of the others, which provides **progressive** checking action.

HERE'S HOW IT WORKS to give you the *smoothest* shuttle check you've ever had . . .

The separate bands, operating as a team, absorb shuttle shock gradually, eliminating shuttle bounce and jerky checking. Wear is distributed over all four bands, lengthening the check strap life.

Furthermore, the bands are individually molded of Gates Tex-Hide—the resilient material that doesn't stretch, outwears leather and composition, and is unaffected by changes of temperature and humidity.

All these advantages of the patented Multi-Check Strap mean longer strap life, less down-time, and smoother loom operation.

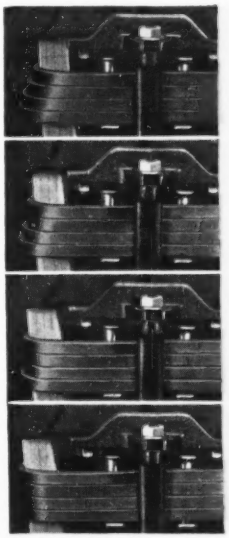
TP-525

Checking action begins as picker stick contacts *top* band of Multi-Check Strap.

Stick is then slowed by *second* band of tough, resilient Tex-Hide.

Third band comes into play, absorbing more of the force of shuttle and stick.

Fourth band, in turn, takes its share of the shock. Picker stick is cushioned *gradually* to a smooth stop by *all four bands* acting together.



Gates

TEX-HIDE Multi-Check Strap

Gates Textile Accessories—Products of *Specialized* Research

Tex-Hide Harness Straps

Tex-Hide Reversible Picker

Tractive-Rib Roll Covering
Cone and Evener Belts
V-Belt Loom Drive
Textile Mill Hose

Tex-Hide Loop Picker

Tex-Hide and Super Tex-Hide Lug Straps

THE GATES RUBBER COMPANY • DENVER, U.S.A.

Engineering Offices and Stocks in All Textile Centers

TEXTILE BANKING COMPANY

Inc.

Factoring Service

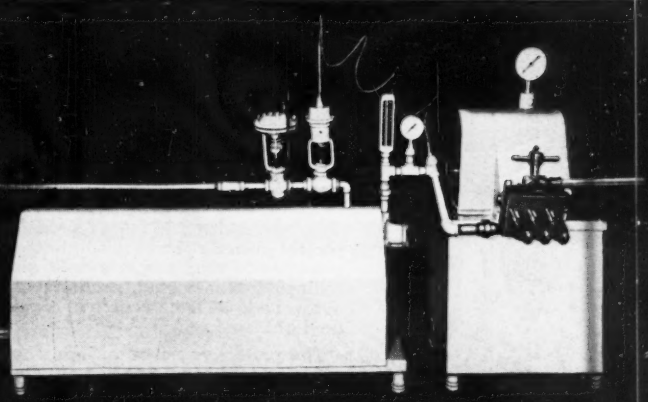
Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK

Better Slashing and Weaving

with the SCOTT & WILLIAMS HYDROPULSE

- no waste of sizing
- saving on starch
- saving on steam
- better process control
- increased weaving efficiency



The Scott & Williams Hydropulse consists of a heat exchanger and a high pressure homogenizer designed to work in tandem.

The Scott & Williams Hydropulse is engineered specifically for textile warp size preparations. It automatically prepares homogenized size at the rate of slasher consumption.

1. You eliminate sizing waste. All the size mix goes to the homogenizer, and all the starch is used. There is no chance for starch to stick to cooking kettles as in older, slower, batch methods.

2. You save on starch costs. Use less expensive, thick, boiling starch instead of costlier modified thin boiling starch.

3. You save on steam costs. Recent tests show *50% less* steam is required by the Hydropulse as compared with old-fashioned batch methods.

4. You get better process control. Major variation in size quality is eliminated because of more precise methods of mixing and handling.

5. You obtain increased weaving efficiency. Since only *fresh* size is used viscosity is closely controlled, and other troubles such as shedding, hard size and soft warps minimized.

All of these advantages add up to savings that soon pay for the installation (in less than a year in actual cases).

Manufactured by

Pioneer Division, Scott & Williams, Inc.
Empire State Bldg., New York 1, N. Y.

Southern Sales and Service:

Southern Sizing Company

EAST POINT, GEORGIA

Light! ... for PROTECTION

Type DCX-18 Searchlight

Type ADE-14 Floodlight

Type LCE-1120 Floodlight

America is faced with the ever-present danger of sabotage that would cripple vital services and production facilities. Sabotage thrives in darkness. The most reliable and cheapest form of protection against night prowlers is LIGHT!

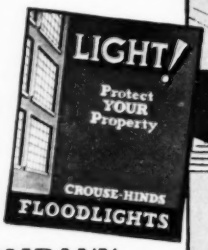
CROUSE-HINDS Floodlights

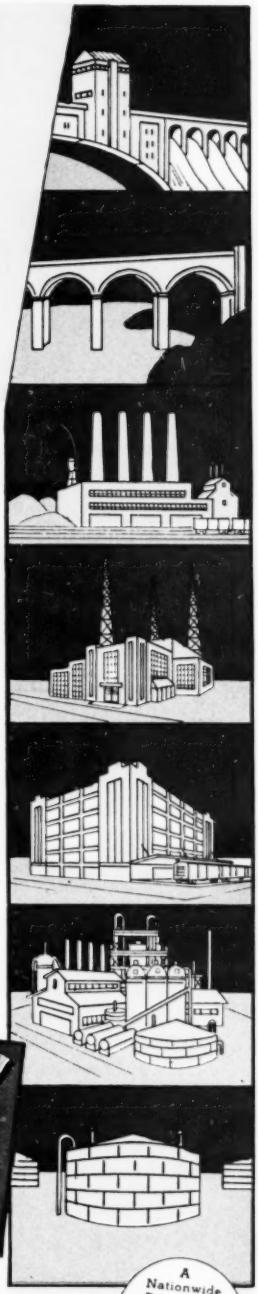
project powerful beams of light that bathe all approaches to your property with glaring radiance, killing darkness and shadows and compelling everyone to be more visible at night than in broad daylight.

The protective power of light should be used in all important municipal and industrial locations, including waterworks, dams, pumping stations, gas works and gas storage tanks, electric power plants and substations, factories, mills, mines, bridges, docks, warehouses, railway terminals, tunnels, shops and freight houses, canal locks, and aqueducts, oil refineries, pump houses and storage tanks, telephone and telegraph stations, radio stations.

The floodlighting of industrial plants serves a double purpose. It helps to boost production in addition to the security it provides.

Crouse-Hinds offers a complete line of floodlights and searchlights that will meet the needs of any type of protective lighting. Crouse-Hinds illumination engineers have a wealth of protective lighting knowledge that is at your service. Send for your copy of Bulletin 2565, "LIGHT! Protect Your Property."





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Syracuse 1, N. Y.

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CROUSE-HINDS COMPANY OF CANADA, LTD., TORONTO, ONT.

ALSIMAG® GUIDES for WHITIN-SCHWEITER QUILL WINDERS

These AlSiMag Guides have been thoroughly proved in the winding of synthetic yarns at terrific speeds.

ADVANTAGES:

LONGER LIFE—Many mills report that these AlSiMag guides give 10 to 15 times the wear obtained from their best former guides.

LIGHTER TENSIONS—AlSiMag guides can be supplied in satin or highly polished finish.

MORE UNIFORM TENSIONS—AlSiMag guides are homogeneous and are uniform physically and dimensionally.

LESS GUIDE BREAKAGE—All AlSiMag materials are considerably stronger than ordinary ceramic guide materials. AlSiMag 513 has almost double their mechanical strength.

BETTER QUALITY YARN—Hard, homogeneous AlSiMag has no surface skin to wear through, cause undetected yarn damage. Guide wear is very gradual, simply exposes new surfaces of the same character as the original.

AlSiMag No. GU-10713-B

AlSiMag No. GE-16861

AlSiMag No. GS-24244

AlSiMag No. GE-15978

These AlSiMag Guides are available in either satin finish or highly polished finish in any of these AlSiMag materials.

ALSIMAG 192—(Considered standard). A non-conductor of electricity. Hardness of 8 on Mohs' scale. Gives exceptionally long life on most requirements. Ivory color.

ALSIMAG 193—A conductor of electricity, used for dissipating static charges. Metallic gray color. Otherwise it is identical to AlSiMag 192.

ALSIMAG 513—Super hard (9 on Mohs' scale), resistant to cracking, chipping, great mechanical strength. Its cost is justified where excessive wear is experienced or where satin finish must be maintained under severe conditions. Pink color.

TEST SAMPLES ON REQUEST

Try these AlSiMag Guides on your Whitin-Schweiter Quill Winders. You'll find that they are the best and by far the most economical.

50TH YEAR OF CERAMIC LEADERSHIP

AMERICAN LAVA CORPORATION

CHATTANOOGA 5, TENNESSEE

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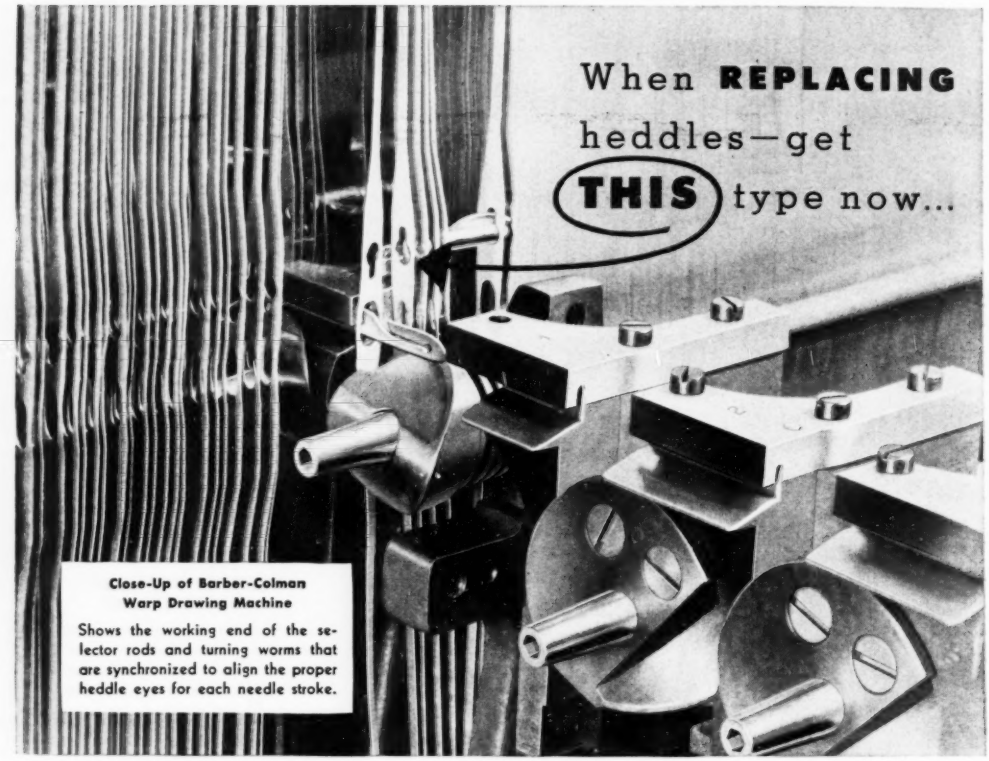
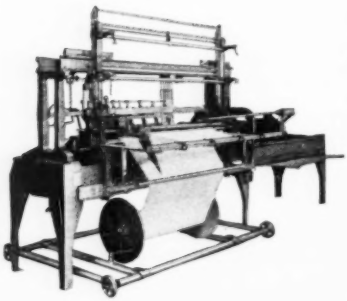
LOS ANGELES, 232 South Hill St., Mutual 9076 • CHICAGO, 228 North LaSalle St., Central 6-1721 • ST. LOUIS, 1123 Washington Ave., Garfield 4959


When REPLACING
heddles—get
THIS type now...
Close-Up of Barber-Colman Warp Drawing Machine
Shows the working end of the selector rods and turning worms that are synchronized to align the proper heddle eyes for each needle stroke.

By replacing your heddles with key-hole type **NOW** you will be ready for a Warp Drawing Machine **LATER**



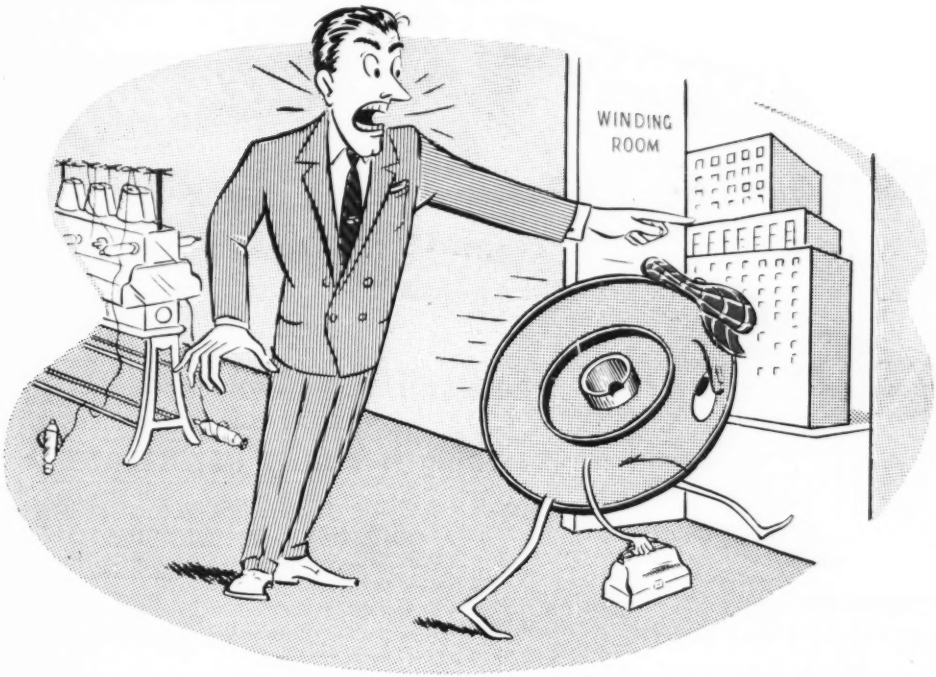
The Barber-Colman Warp Drawing Machine requires equipping your looms with harness having steel heddles of the type shown above. Sometimes the cost of such heddles may amount to more than the cost of the machine. These facts should not discourage consideration of the machine, in view of the advantages of substantial cost savings in warp preparation. Since you are replacing groups of your heddles frequently and constantly as they wear out — why not replace your worn-out harness with the type that can be used on a Barber-Colman Warp Drawing Machine? Then, when you are ready for the machine, the problem of special heddles will have been solved. For details in connection with such a program, we suggest you consult your Barber-Colman representative.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY



Get rid of this "Saboteur of Profits"

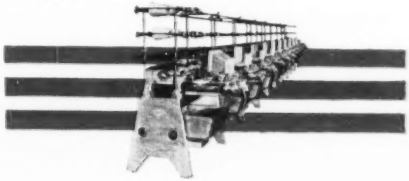
A builder wheel is basically unsound when winding filament yarns, because it determines the lay of the yarn on the bobbin by contact with the yarn and can cause broken filaments. A builder wheel is a "saboteur of profits" It can be responsible for excessive loom stoppage and fabric seconds.

The Foster-Muschamp Autofill, a fully automatic machine for winding filament yarns on filling bobbins, does not use a builder wheel. It uses a set of gears (which do not contact the yarn) to lay the yarn on the bobbins in a predetermined and precise arrangement. Thus all bobbins are uniform and deliver in a uniform manner from the shuttles. Broken filaments, tight picks, broken ends and fabric seconds are greatly reduced.

If you have "saboteurs of profits" in your winding room, find out more about the Foster-Muschamp Autofill Winder. Send for Bulletin M-1 (no obligations).

FOSTER MACHINE COMPANY
WESTFIELD, MASS.
Southern Office, Johnston Bldg., Charlotte, N. C.

FOSTER - MUSCHAMP AUTOFILL WINDER



MANAGER

SUPERINTENDENT

Whether You Are...

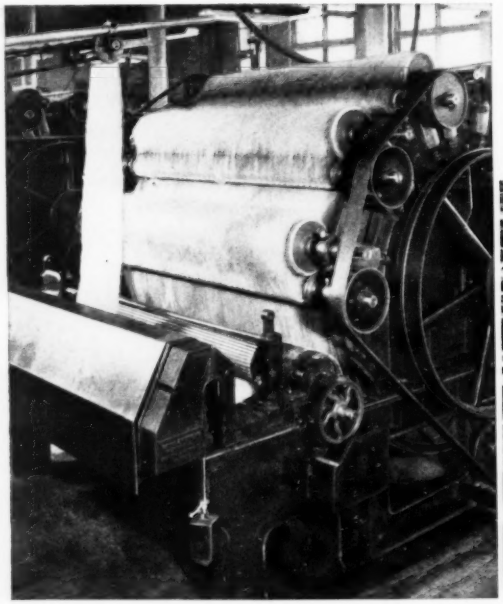
PURCHASING AGENT

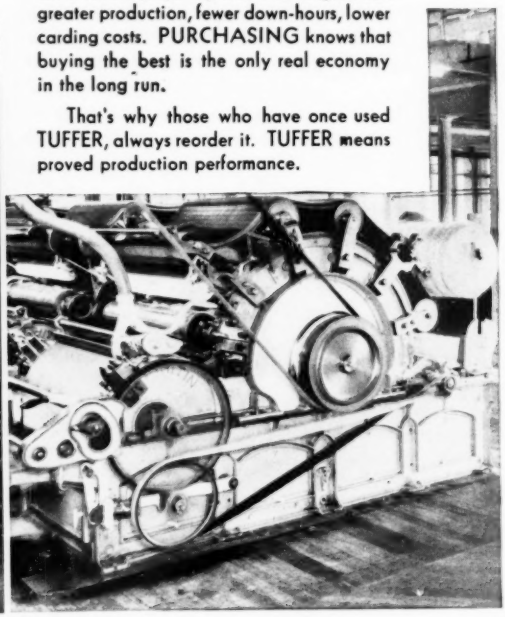
OVERSEER

The Quality of Your Card Clothing is vitally important

MANAGEMENT and PRODUCTION know that top quality card clothing means greater production, fewer down-hours, lower carding costs. PURCHASING knows that buying the best is the only real economy in the long run.

That's why those who have once used TUFFER, always reorder it. TUFFER means proved production performance.





HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Georgia and Gastonia, N. C. **Branch:** Philadelphia, Pa.

Direct Representation in Canada

A-2

. . . IT PAYS TO SPECIFY TUFFER CARD CLOTHING

CUT COSTS WITH DUOFOL

"the fastest wetting out agent on the market"

Hartex Products:

- Rayon Oils & Sizes
- Nylon Oils & Sizes
- Kier Bleaching Oils
- Finishing Oils
- Synthetic Detergents
- Conditioning Agents
- Scrooping Agents
- Splashproof Compounds
- Delustrants
- Leveling Agents
- Cationic Softeners
- Cotton Warp Dressings
- Wetting-Out Agents
- Weighting Agents
- Mercerizing Penetrants

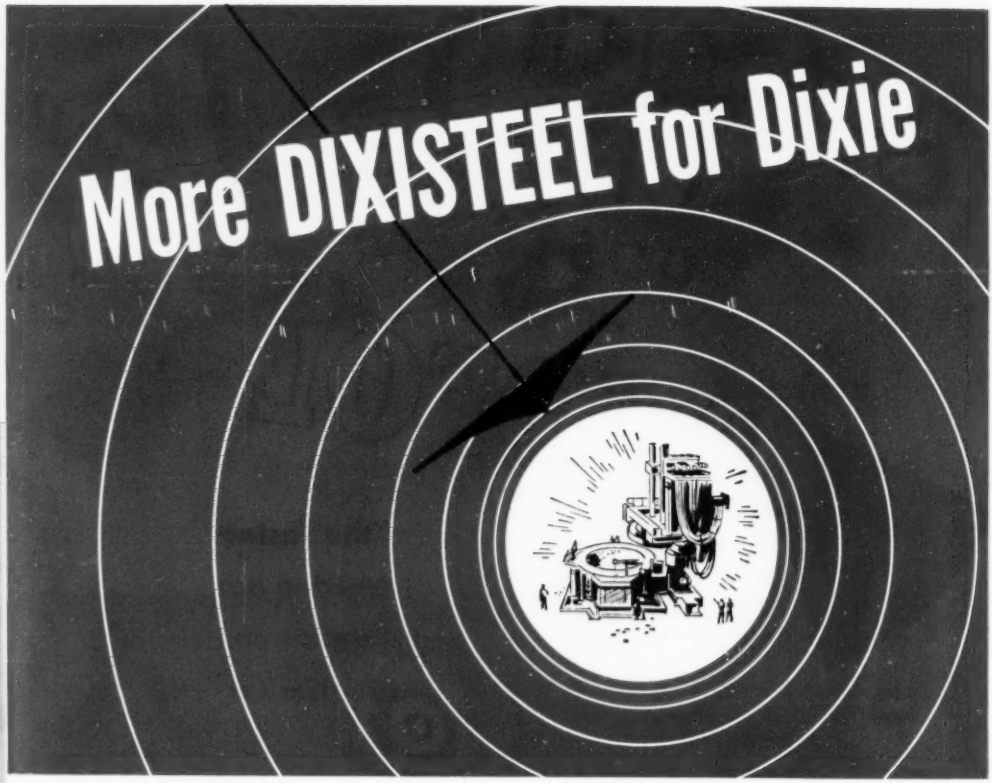
Here's a synthetic surface-active compound whose outstanding wetting and re-wetting properties afford real economies. DUOFOL dissolves immediately in hot or cold water and may be used in acid baths. It is stable and shows its exceptional wetting power in water as hard as 500ppm.

DUOFOL is recommended for vat or pad dyeing, package dyeing and for dyeing operations in general to give greater uniformity of shade. Where wetting back effects are required, DUOFOL renders fabrics highly absorbent and imparts a soft, desirable hand. Concentrations of from 2 to 7 ounces per 100 gallons are sufficient for most applications.

HART PRODUCTS

THE HART PRODUCTS CORPORATION
1440 Broadway, New York 18, N. Y.
Works and Laboratories: Jersey City, N. J.
The Hart Products Company of Canada, Ltd., Guelph, Ontario

based on research



Southeast's Largest Electric Furnace To Increase Our Steel Output by 50%

DIXIE'S LARGEST ELECTRIC FURNACE

- Uses as much electricity a day as a city of 10,000 population.
- Makes a heat of steel in about 4 hours, compared to 8 hours or more for an open hearth furnace.
- Can be fully charged in less than 30 minutes, or 7 times as rapidly as an open hearth furnace of the same capacity.
- Requires no pig iron for producing low-carbon steel—uses scrap alone without impairing quality.
- Is equipped to produce high-carbon, special strength alloy steels, including stainless.

To MEET the growing demands of national defense and civilian needs for more steel, we are proud to announce the addition of the Southeast's largest electric furnace to our steel-making facilities.

This new, 60-ton giant will increase our output of steel ingots by 50%, resulting in a corresponding increase in the production of steel products bearing the name "DIXISTEEL."

This one new, ultra-modern furnace will produce half as much steel as our present three 75-ton open hearth furnaces, which produced over 200,000 tons of steel ingots in 1951.

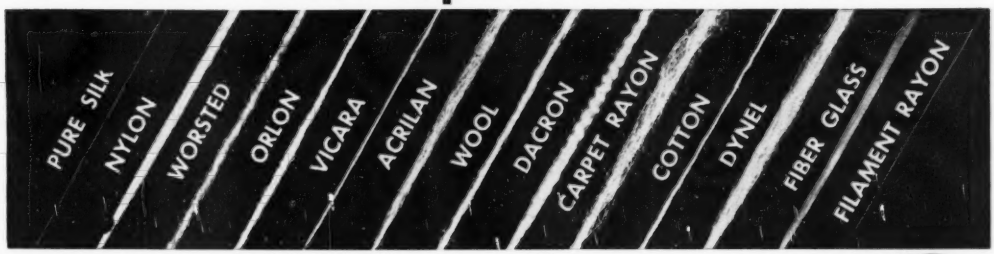
Now more than 300,000 tons of DIXISTEEL will annually find its way into the hands of our customers throughout Dixie, many of whom we have served for more than a half-century.

Atlantic Steel Company

MAKERS OF DIXISTEEL SINCE 1901

ATLANTA, GEORGIA • EMERSON 3441

Do You Spin or Twist?



THEN YOU SURELY NEED

HERR CONICAL RINGS

- **Stops Yarn Breakage**
- **Permits Heavier Doffs**
- **Keeps Yarn Cleaner**
- **Produces Smoother Yarn**

Each textile fiber shown above presents wonderful opportunities —each has special characteristics and handles differently.

Ask us how yarn tension uniformity is controlled with the Herr Conical Ring . . . How we reduce ends down . . . How controlled lubrication affects cleanliness.

You can adapt your equipment for any textile fiber or blend if you use Herr Conical Rings.

Ask for help on your problem.

Gentlemen:
Please send literature on Herr Conical Rings and Herr Flyers.
Name .....
Position .....
Company address .....
Our problem is .....

HERR MANUFACTURING CO., INC.
310 FRANKLIN STREET, BUFFALO 2, NEW YORK

DRYING PROBLEMS?

JUST WRAP 'EM UP AND SEND 'EM TO US!

TEXTILES All Fibres
RUBBER
CHEMICALS
SOAP
PLASTICS
FOOD Including Cereals and Fruits
WOOD PRODUCTS
BUILDING MATERIALS
PAPER PRODUCTS Including Clay Fillers

Part of SARGENT's Research Laboratory, Specifically designed to help solve drying problems for Industry.

IN THE **SARGENT** RESEARCH LABORATORY
any mill condition and any stock condition can be duplicated, to determine:

1. The one best, exact, commercially practical method of drying your product.
2. How to attain highest production rate in pounds of stock per hour per square foot of drying area, economically.
3. Air flow data
4. Required temperatures
5. Required heating surface
6. Dryer length and design
7. Apron or roller (feeding) speed
8. Exact development of drying curves required.
9. Possible simple changes in stock preparation prior to drying, to attain maximum quality and efficiency.
10. Controls required to maintain quality and quantity drying in uniform, continuous production.

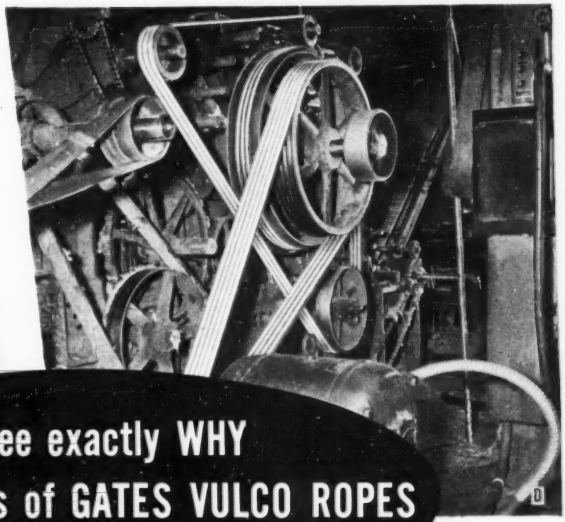
CONSULT THE EXPERTS

C. G. SARGENT'S SONS Drying Research Laboratory for Industry is staffed by men who KNOW their jobs. They have the mental curiosity of the true scientist combined with the dollars and cents, how-can-it-be-done-to-keep-quality-up-and-cost-down outlook of experienced mill men. Here is an invaluable source of experience and knowledge, to serve you and your industry. Wherever a drying process occurs, from food to plastic, textiles to rubber, paper to paint, SARGENT'S Drying Research Laboratory is highly qualified to serve, advise, recommend, and design special drying equipment.

Bring us your drying problems — the more difficult they are, the better we like them!

C. G. SARGENT'S SONS CORP.
Graniteville, Massachusetts
SINCE 1852

Gates Vulco Ropes — replacing flat belts on this Garnett machine — saved Bender Bros., Inc., of Camden, N. J. over $1,000 a year in maintenance expense.



Let's see exactly WHY the Concave Sides of GATES VULCO ROPES mean lower V-Belt Costs!

Every engineer knows how a V-belt *changes shape* when it bends around a pulley.

The top of the belt is under tension—making it grow *narrower*.

The body is under *compression*, causing the sides to bulge out!

Look at figure 1-A in the diagrams, herewith. There you see how a *straight sided* V-belt is forced to bulge in its sheave-groove —and this bulging naturally causes extra wear along the middle of the sides as indicated by the arrows.

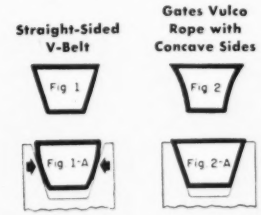
Now look at the figure 2-A. There you see how the precisely engineered Concave Sides fill out to an exact fit in the sheave groove.

Clearly, the Concave Sides press *evenly* against the V-pulley. This means uniform wear; longer life! The Concave Sides have *full traction;* wear longer because of *full contact!*

To sum up: The Concave Sides of Gates Vulco Ropes (U.S. Patent No. 1813698) give you (1) Less wear, (2) More pulley contact, (3) More sure power transmitted when needed!

Only V-belts made by Gates are built with concave sides. Whenever you buy V-Belts, be sure you get the V-Belt with the Concave Sides—The Gates Vulco Rope!

What Happens When a V-Belt Bends



How Straight-Sided V-Belt Bulges in Sheave-Groove. Sides Press Unevenly Against V-Pulley Causing Extra Wear At Point Shown by Arrows.

The Concave Sides Fill out to a Precise Fit in the Sheave Groove. No Side Bulge! Sides Press Evenly Against the V-Pulley—Uniform Wear—Longer Life!

CS-521

World's Largest Maker of V-Belts

Gates®

Hose V-Belts
Molded Rubber Goods
for Industry

VULCO ROPE DRIVES

ENGINEERING OFFICES AND JOBBER STOCKS IN ALL INDUSTRIAL CENTERS

THE GATES RUBBER COMPANY • DENVER • U•S•A

How to make a profit on the roving operation

1. MAKE MORE ROVING in less time. The higher speeds and increased efficiency of the Platt M • S • 2 will result in production increases.

2. KEEP FRAMES RUNNING. Unprecedented fiber and twist control results in an extremely strong and regular roving which has reduced the end breakage rate as much as 50%.

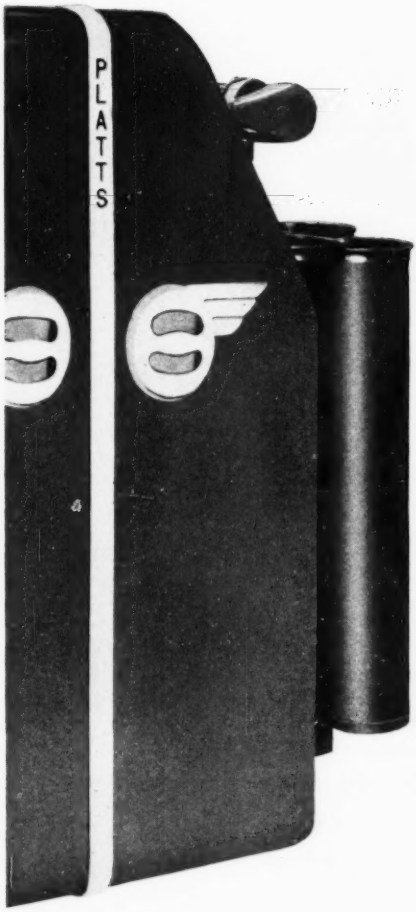
3. REDUCE WASTE accumulation by as much as 75% as the firmer roving produced by the M • S • 2 does not shed as much fly, a contributary cause to end breakage.

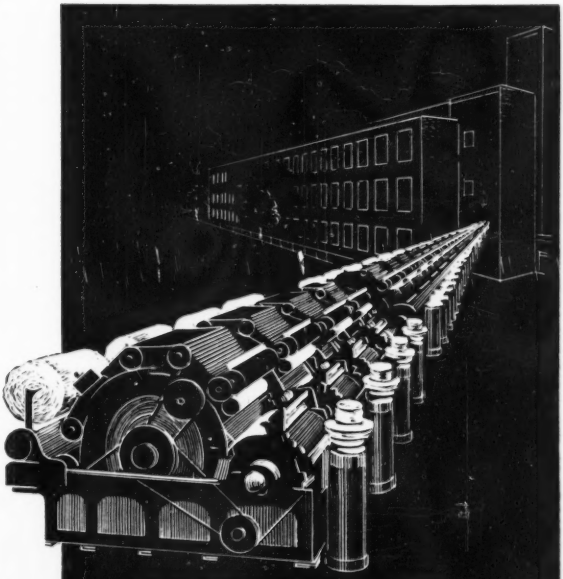
4. INCREASE EFFICIENCY of operatives with the larger bobbins, fewer ends down and the low maintenance engineering of the M • S • 2. It is a very quiet machine, which in itself tends to raise the efficiency of every person in the department.

5. GET MORE MACHINE FOR YOUR DOLLAR. We are sure we can prove to you, on either a productive or a longer life basis, that the M • S • 2 would be a highly profitable machine in your roving department.

PLATT BROS.
SALES LTD. OLDHAM, ENGLAND

the M·S·2 High Draft ROVING FRAME





HOW FAR DO THE EFFECTS OF GOOD CARDING EXTEND?

The effects of better carding are felt immediately in the roving, spinning and even twisting departments. We feel that our world-wide experience with machinery in ALL these departments is unsurpassed. Perhaps we could help you select the machines that will best fit into your mill's operation. Your inquiry will incur no obligation and the results will prove of real value to you.

Atkinson, Haserick & Co.

a.h.

Textile Machinery Agents and Engineers Since 1823

211 CONGRESS STREET
BOSTON 6, MASS.
1639 W. MOREHEAD STREET
CHARLOTTE 2, N. C.

Teamwork

It takes teamwork to make sweet music — whether it's a barbershop quartet oiled for harmony, or the satisfying sound of smooth operation in industry.

What can we do to help insure the future of your business? That's what Butterworth engineers have been asking for 131 years — the question has special meaning today.

Thinking of new machines? We will do the utmost to meet your requirements, within the limits of our metal allotments. Making long range plans? Our engineers are at your service. Even now they are teamed with many of America's leading mills, thinking of the years ahead and planning with them to maintain their competitive position.

Butterworth service is offered too, to help your wet finishing department get the most out of what you now have — to keep equipment at peak efficiency. It may be only a spare part you need — but if you need it in a hurry, you'll get it in a hurry if it is humanly possible.

A letter, a wire or a phone call will put a Butterworth engineer on your team.

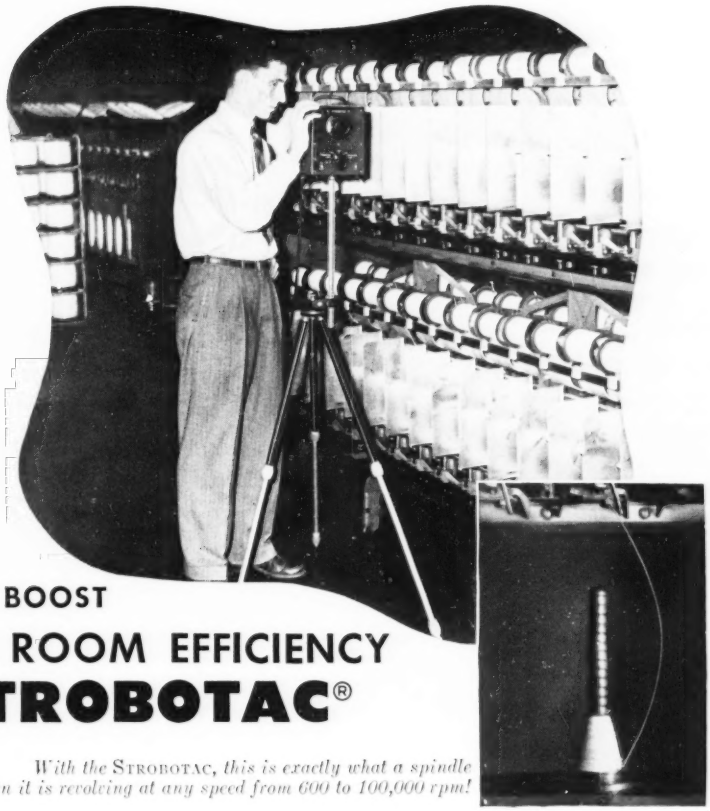
H. W. BUTTERWORTH & SONS COMPANY

Bethayres, Pennsylvania

1211 Johnston Bldg., Charlotte, N.C. • 187 Westminster St., Providence, R.I.

Machines for Bleaching, Boiling-Out, Mercerizing, Dyeing, Finishing and Embossing : : Pot Spinning Machines for Synthetic Fibers
Calender Rolls : : Tenter Chains

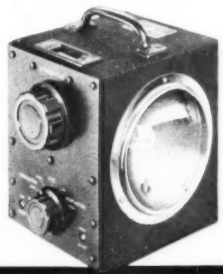
BUTTERWORTH



it's simple TO BOOST SPINNING ROOM EFFICIENCY *with the* STROBOTAC®

With the STROBOTAC, *this is exactly what a spindle looks like when it is revolving at any speed from 600 to 100,000 rpm!*

For the maintenance of correct and uniform spindle and traveler speeds the STROBOTAC is ideal. It requires *no* mechanical or electrical connection to the spindle or its shafting. It is simple to use, inexpensive, portable, light weight, very accurate, and can be operated by anyone.



Type 631-B Strobotac $140

Defects such as slack or dirty bands and tapes, spindles that need oiling, crooked idlers, chokes in idlers . . . under spindles . . . on bolster . . . on spindle clutch . . . in bobbins, spindles out of plumb, crooked or worn spindles, crooked bobbins, bad rings, bad or worn travelers, ring rail not level, band and tape out of whorl, thread in whorl, excessive band and tape slippage, split and worn bobbins, bobbins that do not properly fit the spindle, uneven yarn, mixed yarn and oily yarn . . . all of these can be detected simply by anyone with a STROBOTAC.

For the measurement of speed, the STROBOTAC is calibrated to read *directly in rpm* from 600 to 14,400. By indirect methods, speeds up to 100,000 rpm can be measured.

When used as a stroboscope, it is simple to make any rotating or reciprocating machine or part appear to function in s-l-o-w motion . . . even as slow as a fraction of an rpm . . . while the equipment is operating at its normal speed.

Thousands of STROBOTACS are in use daily in textile mills all over the country. Progressive mill officials are enthusiastic over its value in increasing production of frames and in cutting seconds.

GENERAL RADIO Company

275 Massachusetts Avenue, Cambridge 39, Massachusetts

90 West Street NEW YORK 6 920 S. Michigan Ave. CHICAGO 5 1000 N. Seward St. LOS ANGELES 38

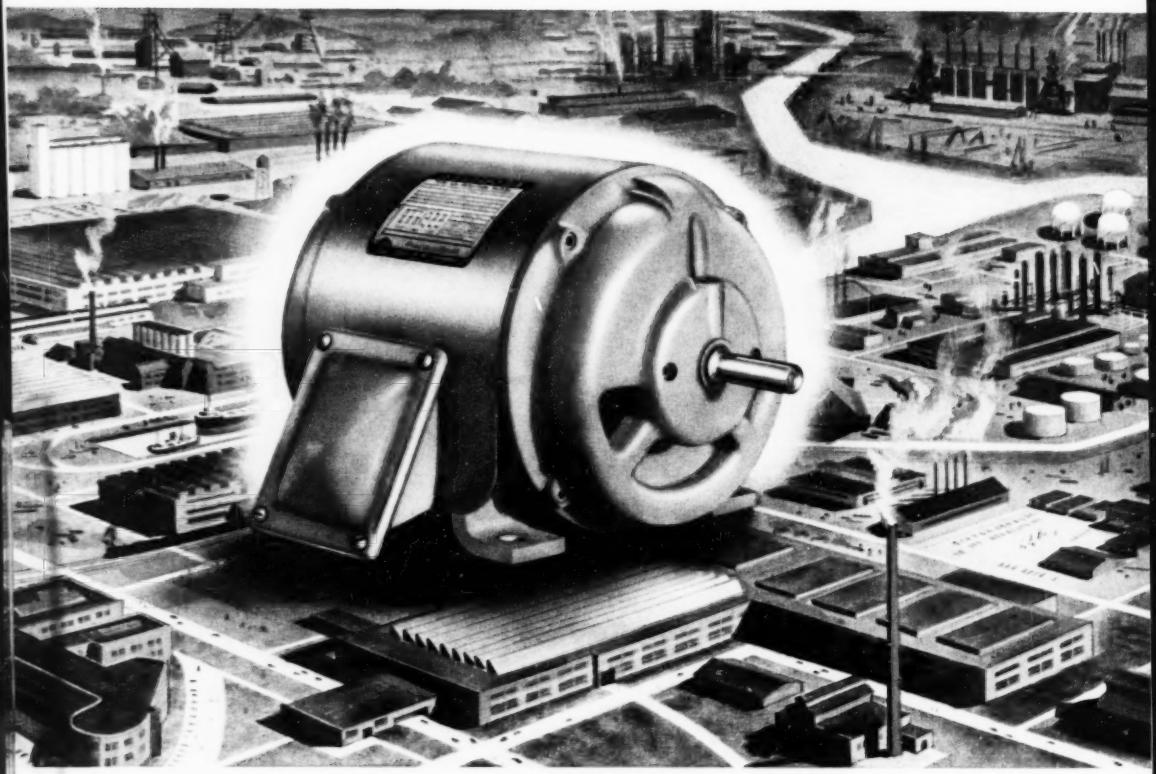
Please send me a copy of "Strobotac Boosts Efficiency in Woolen and Synthetic Mills", "Intelligent Use of Strobotac" and the STROBOTAC BULLETIN.

Name_____

Company_____

Street_____

City_____ Zone_____ State_____



Everywhere in Every Industry, this Fact is Being Proved...

"All Motors are not alike"

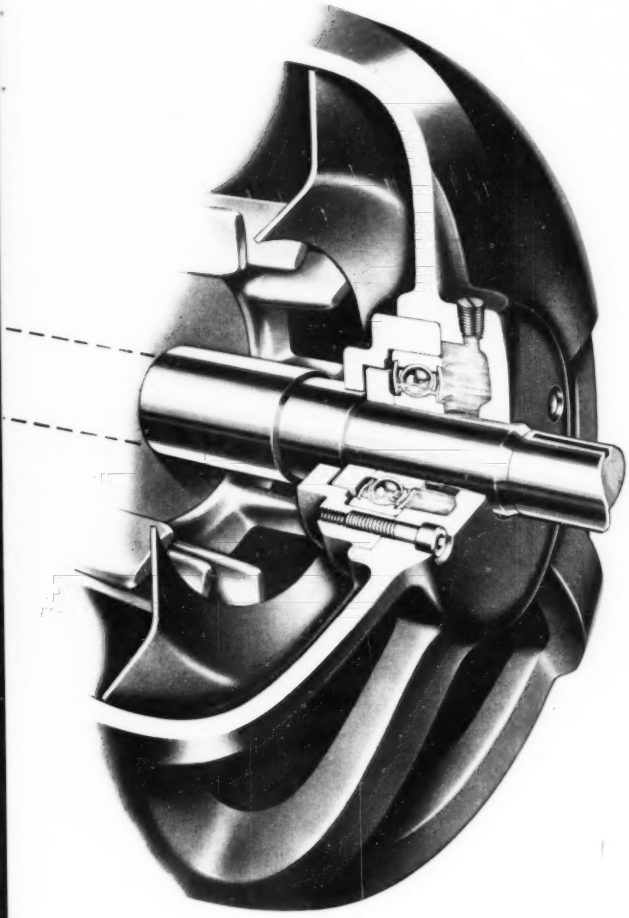
By their superior performance—frequently in rugged 24-hour-a-day service—Reliance Precision-Built A-c. Motors are proving in every industry that *"All Motors are not alike"*. Here are motors which are made differently and made better—to deliver dependable power longer. Their original factory bearing lubrication, for example, provides more operating hours before re-lubrication is necessary than that of any other pre-lubricated bearing. And on the next page you will find a check list of features which combine to make the Reliance design the best pre-lubricated bearing design you can obtain in any motor made today!

RELIANCE
Precision-Built
MOTORS

15 REASONS WHY . . .

the RELIANCE Pre-Lubricated Bearing Design

is the BEST in Electric Motors



- Bearing sealed from dirt and other foreign material.
- Enclosed bearing housing.
- Bearing can be re-lubricated without being disassembled.
- Motor can be re-greased without removing drain plug.
- Automatic grease relief to suit any lubrication system.
- Protection against grease entering windings.
- Balls free of direct pressure during lubrication.
- Bearing can be removed without danger of distortion.
- Reservoir to protect against under-greasing.
- Standard commercial ball bearings.
- Larger grease reserve than provided with any standard bearing.
- Grease supply free of churning action.
- Measuring unnecessary to prevent over-greasing.
- Unnecessary to grease equally at each side of ball race.
- Lubricant is retained in ball race.

Write for Bulletin detailing all of the advantages you get with the RELIANCE Pre-Lubricated Bearing Design

Cutaway views, comparison chart and statements by bearing manufacturers offer more complete evidence of the superiority of the Reliance Pre-Lubricated Bearing Design. Specify Bulletin B-2201.

Reliance PRECISION-BUILT A-c. Induction Motors available from 3/4 to 300 horsepower

Sales Offices in Principal Cities

RELIANCE ELECTRIC AND ENGINEERING CO.

1085 IVANHOE ROAD, CLEVELAND 10, OHIO • CANADIAN DIVISION: Welland, Ontario

Introducing The new Callaway NARROW FABRIC SLASHER

A Versatile Slasher Particularly Designed for:

NARROW FABRICS
Ribbon, Tapes, Belting,
Braid, Elastics, Goring

SHORT-RUN STYLES

SAMPLES

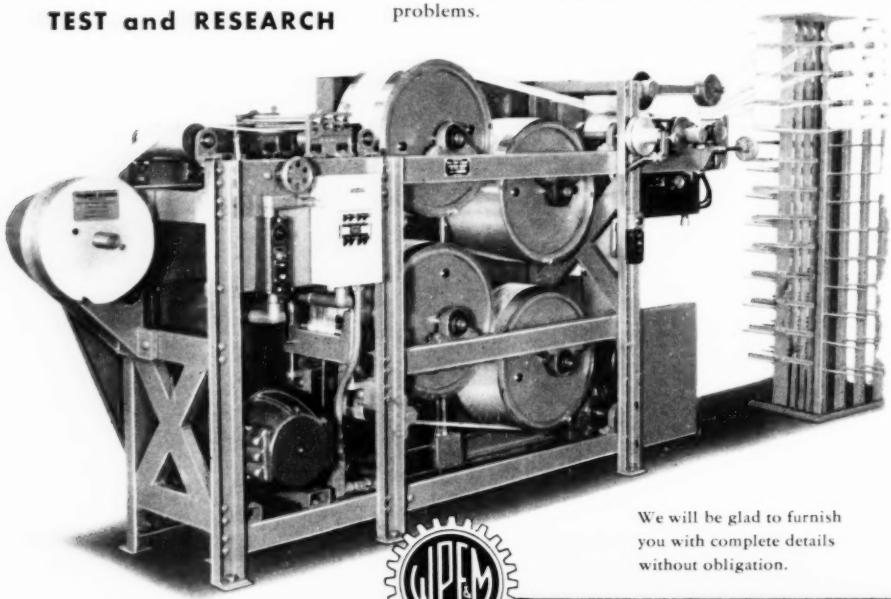
TEST and RESEARCH

This new all-electric Slasher is a complete and efficient slashing unit designed particularly to fit the slashing requirements of the narrow fabric industry, samples and short-run styles, and testing and research in mills and schools.

Using a minimum amount of yarn—cotton, synthetic, silk, wool or worsted—direct from individual packages, without warping or beaming, this versatile slasher can be regulated to run from zero to 40 yards per minute.

From the stainless steel size box through the four 8" face electrically-heated drying cylinders to the head end, essential controls and adjustments are provided for all phases of operation.

At reasonable initial cost and low operating expense, this new, versatile Slasher answers many small-run slashing problems.



We will be glad to furnish you with complete details without obligation.

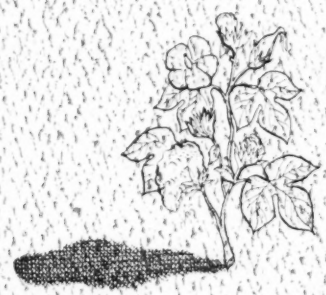
WPF&M WARP PREPARATION MACHINERY
STANDARD 2 and 3 CYLINDER SLASHERS
MULTI-CAN SLASHERS
WPF&M HI-SPEED 4 CYLINDER SLASHERS
CALLAWAY SAMPLE SLASHER

SLASHER MODERNIZATION EQUIPMENT
HI-SPEED HEAD ENDS WITH STRETCH CONTROL
STANDARD WPF&M HEAD ENDS
MULTI-MOTOR DRIVES and CONTROLS
TEMPERATURE, SPEED and TENSION CONTROL DEVICES
HI-SPEED SIZE BOXES
MODEL 50 SIZE BOXES
STANDARD SIZE BOXES
SIZE KETTLES and EQUIPMENT

WEST POINT FOUNDRY & MACHINE CO.
WEST POINT, GEORGIA

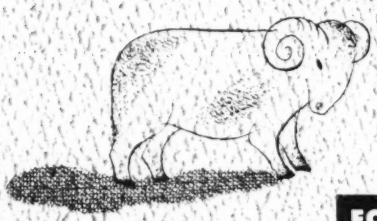
For the uniform results you want . . .

DEPEND ON HOUGHTON TEXTILE PROCESSING PRODUCTS



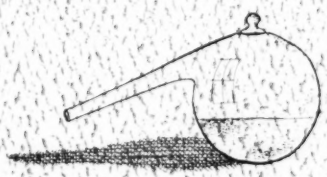
FOR COTTONS

Depend on Houghto-Size sizing compounds . . . concentrated . . . providing high weave-room efficiency. For slicker warps with excellent fiber lay use also Houghto-Wax in the size kettle.



FOR WOOLENS

Sulfol 448, non-ionic stock lubricant for woolens and worsteds, which minimizes static, is odorless, non-staining, non-corrosive. Also Lanolubric wool oils, well known for over half a century for their dependable performance.



FOR SYNTHETICS

Raylubric oils for softening, soaking and throwing rayon and synthetic fibers.

For scouring and wetting applications, remember these Houghton surface active agents:

CERFAK . . . the trade name to specify when *detergency* is the chief factor you want.

SURFAX . . . selected whenever exceptionally good *wetting* and *re-wetting* power is needed.

Ask your Houghton Man for full information or write E. F. Houghton & Co., Philadelphia 33, Pa.

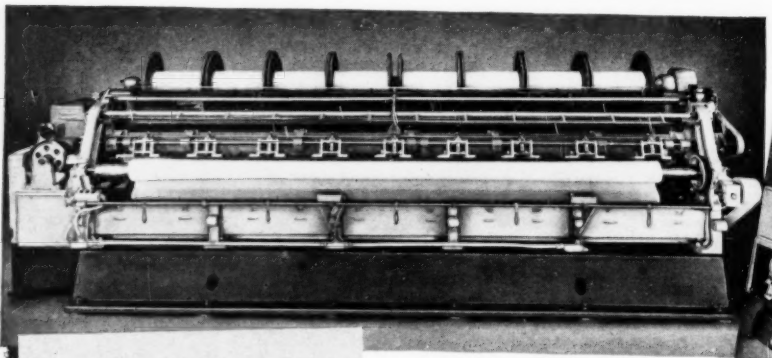
. . . products of

E. F. HOUGHTON & CO.

PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

You'll hit new production records with the Kidde-Aveco Tricot Machine!



Left end of machine showing enclosed gear box, pattern mechanism, motor and the controls.

CHECK THESE FEATURES:

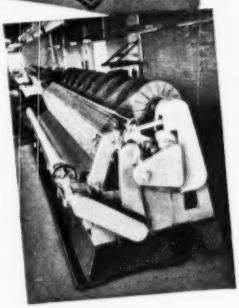
New Continuous Let-Down
Easy to set and maintain because it's mechanical. Eliminates shade marks, reduces stop marks and improves fabric quality.

New Variable Speed Drive
A turn of a hand wheel varies machine speed. No chain drive . . . no gears to be changed . . . quieter operation. Tachometer included.

New Continuous Take-up
Quality is established by a simple turn of adjustment screw. No gears or sprockets to be changed. No clutch. Once set, it requires no adjustment.

Other Features
These include improved plunger design, improved front guide bar lifting mechanism, quick-stop and jogging control.

NEW KIDDE-AVECO IS A HIGH POUNDAGE PRODUCER



Right end showing continuous let-down and take-up.

The new Kidde-Aveco Tricot combines the essentials for large production... high operating speed with high efficiency. Speeds up to 450 courses, depending upon the pattern and yarn, are practical and are being maintained in mills today.

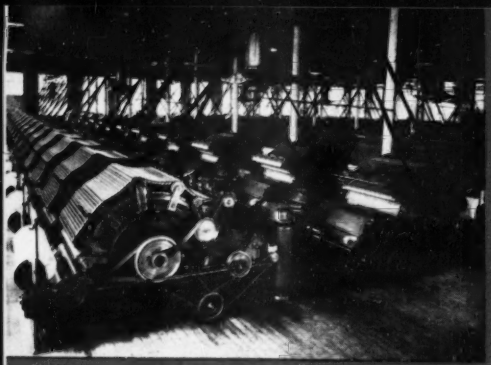
Equally important, the Kidde-Aveco Machine has acquired a reputation for low needle breakage. The press action is gentle and the needle life is better than usual. This means fewer defects and less down time. Other factors contributing to efficiency are enclosed cams running in oil... a one-piece cast girder that maintains machine alignment... and the rugged one-piece base... all exclusive Kidde-Aveco features.

Either to replace old machines or to increase capacity, the Kidde-Aveco is worth investigating. May we send you complete information?

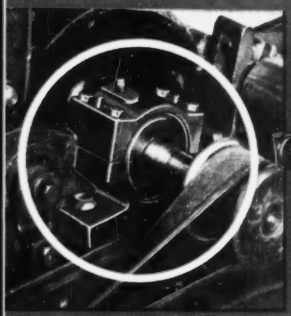
KIDDE MANUFACTURING CO., INC., BLOOMFIELD, NEW JERSEY

Kidde-Aveco

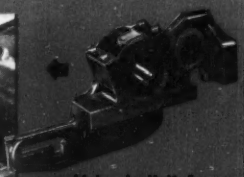
FOR TOP-QUALITY FABRICS



Card Room Licker-ins, Fafnir Equipped

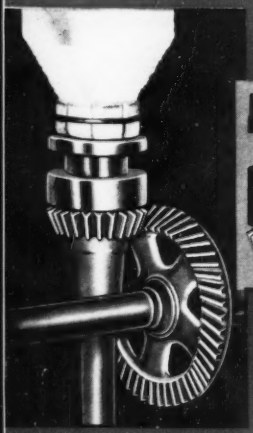


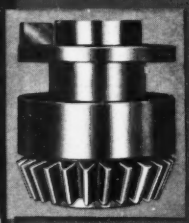
Typical Licker-in Application



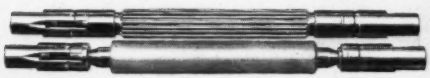
Licker-in Unit for Saco-Lowell Card

Drive Shaft Unit for Saco-Lowell Drawing Frame





Roving Frame Bobbing Gear — American Engineering Corporation



Medley Drawing Frame Top Rolls — Fafnir Equipped.

TURNING POINTS
to greater efficiency in Carding Operations

If manpower shortage is a threat, perhaps the wider use of ball bearing equipment can ease this situation for you. In the modern card room where original settings must be maintained for continuous uniform production on lappers, combers, drawing frames and roving frames, Fafnir Ball Bearing Textile Units are making an important contribution to increased efficiency. For example, a lapper will make a better, firmer lap if the calender racks are fitted with anti-friction rollers. It will make an evener lap if the apron and evener mechanism is equipped with anti-friction bearings.

Turn to Fafnir Ball Bearing Units for the answer to how to increase the efficiency of your carding operations. Both standard and special textile units are available for this textile process. Many units feature the famous Fafnir Wide Inner Ring Bearing with self-locking collar . . . easiest of all to install. Write for catalog. The Fafnir Bearing Company, New Britain, Conn.

Other FAFNIR UNITS for Carding

- Licker-in Unit for Whitin Card
- Pillow Block for Roving Frame Bobbin Gear Drive Shaft
- Doffer Unit for Whitin Card
- Hanger Box with Grease Trap for Card and Weave Room Service
- Bearing Unit for Roving Frame Bobbing Gear

FAFNIR
BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

STOP HEAT WASTE

and excessive maintenance of unit heaters . . . Install

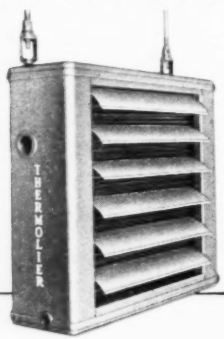
TEXTILE THERMOLIERS

Unit heating obviously is the most economical, flexible type of heating for textile mills. But there can be a "*catch*" in this . . .

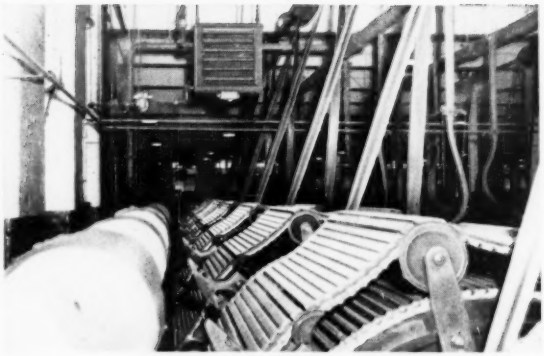
For the fins of heating elements on conventional unit heaters can turn out to be "*dust and lint catchers*" — often plugging the heating element solid in a few days.

To correct this condition, Grinnell designed the Textile Thermolier with a special heating element. This element consists of a series of webbed, pitched U-tubes parallel to one another and assembled into a single header. An extension of the web on the trailing side increases the heating area, while the absence of conventional fin edges minimizes the collection of lint, fly and dust on the heating surface.

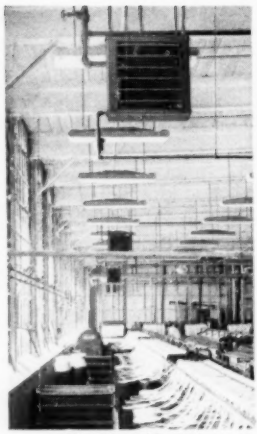
That's why Textile Thermoliers stop heat waste and excessive maintenance — stay cleaner, with practically no service. Get the full facts about Textile Thermoliers today.



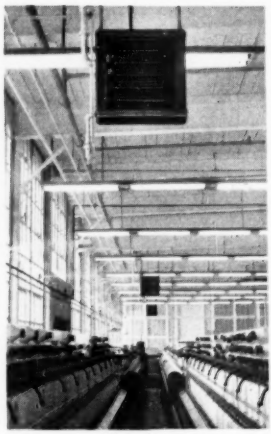
- Parallel openings between the webbed tubes permit air from fan to pass through and keep heating element clean.
- Safety and durability assured with leakproof tube-to-header construction.
- Maximum capacity provided at all times and annoying and destructive water hammer eliminated because built-in pitch of tubes and internal cooling leg assures the continuous drainage of the condensate.
- Plain thermostatic trap, the simplest and least expensive kind of trap, may be used because of Thermolier's exclusive internal cooling leg.



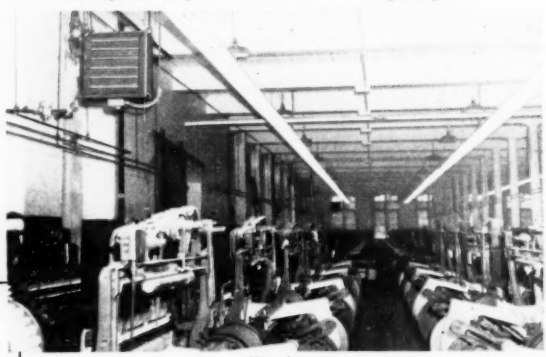
Carding



Drawing and Roving



Spinning



Weaving

GRINNELL

WHENEVER PIPING IS INVOLVED

Grinnell Company, Inc., Providence 1, Rhode Island • Coast-to-Coast Network of Branch Warehouses and Distributors

pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermolier unit heaters • valves
Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies
industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems

For More Durable Wash-Fast Finishes **RHONITE R-1**

Check These Extra Advantages of RHONITE R-1

- ✓ *Non-volatile—applied and controlled with ease on standard resin-finishing machinery.*
- ✓ *Stable to storage—no refrigeration needed.*
- ✓ *Completely soluble in cold water — simply add and stir.*
- ✓ *Compatible with other commonly used finishes.*

Be wise and thrifty; get full details of unique, new RHONITE R-1 resin.

RHONITE, LYKOPON are trade-marks, Reg. U.S. Pat. Off. and in principal foreign countries.

CHEMICALS FOR INDUSTRY

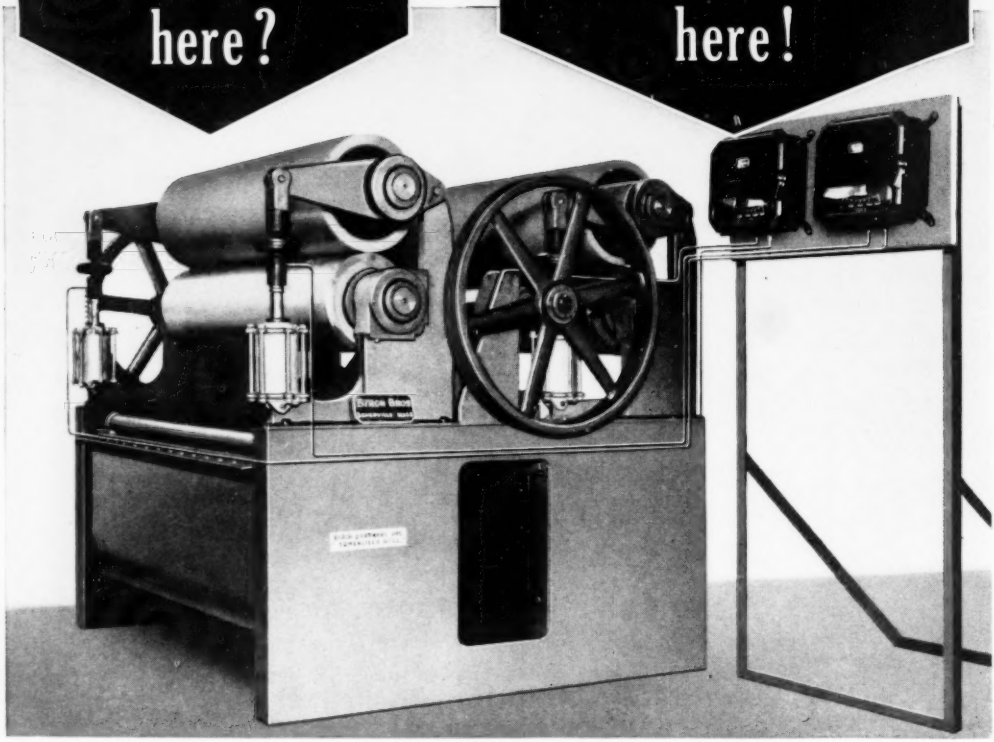
ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

What pressure are you getting here?

Taylor tells the actual pressure here!



Taylor Volumetric Elements on the new Birch Brothers Tandem Mangle let you know exact roll or nip pressure at any time, let you duplicate just the squeeze you want for any type or style of cloth.

HERE'S HOW IT WORKS: The actual pressure applied to the rolls is measured by Taylor's volumetric elements right in the line of thrust . . . one on each end of each roll. The measurements are transmitted to Taylor two-pointer indicators that show actual pressure at each end of the roll. Total pressure is the total of two measurements.

THE RESULT: You read actual pressure, instantly. You know if pressure is uniform throughout the roll, and you know exactly the pounds of pressure being exerted.

Taylor volumetric elements for measuring and controlling roll pressures in many textile applications have been thoroughly field tested in many textile mills. Units are available for load measurements up to 200,000 lbs. and tensions from 5,000 to 20,000 lbs., with remote indication or easy-to-read dial on the unit itself.

This is just one example of how Taylor Instruments can protect quality, cut operating costs too, in most every phase of textile manufacturing. Incidentally, temperature and level controls are recommended for mangles of this type. Ask your Taylor Field Engineer, or write: Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada.

Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

get the latest in FIRE FIGHTING!

If you want the latest in fire fighting, if you want all the fire protection you can get for your money, get a Kidde Dry Chemical Extinguisher.

Here's why: Only Kidde's patented Diffuser Horn blankets fire with a cloudlike pattern of dry chemical that gives you maximum coverage, that cuts down on the danger from splashing of burning liquids. Even an inexperienced operator remains safe behind the "cool" protective wall of powder that's set up.

Nothing new to learn. Just pull the handy trigger.

For all the "extras" in fire protection, insist on Kidde.

Kidde

LOOK IN YOUR CLASSIFIED TELEPHONE DIRECTORY FOR YOUR LOCAL DEALER

Walter Kidde & Company, Inc.

675 Main Street, Belleville 9, N. J.

Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

Where quality is the

first consideration in a fabric

there is no substitute for A C E T A T E

the beauty fiber

Celanese CORPORATION OF AMERICA, New York 16

U.S. ACME
MODERN THROWING EQUIPMENT

SERVICE THAT KEEPS THOSE SPINDLES RUNNING

to help you get better performance and better yarn quality at lower cost...

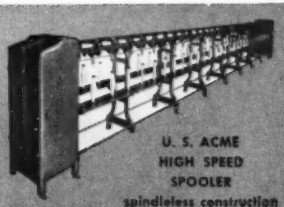
Your throwing profits remain steady . . . your yarn quality remains uniformly high . . . your costs stay low—when your throwing equipment is operating at top performance! These are basic, elementary facts and the reasons why U. S. Textile maintains an adequate stock of repair, replacement and modernization parts for throwing machines.

Whether you need repair parts to "keep those spindles running", or technical service to help you solve new throwing problems with your present machines—*CALL U. S. TEXTILE!*

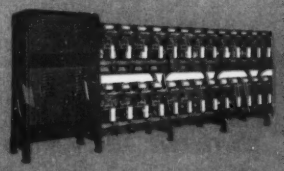
Most orders for parts are shipped within 48 hours, oftentimes the same day, because U. S. Textile service did not end the day you bought the machines!

Yes, a U. S. Textile technical expert will come to your plant when you need on-the-spot cooperation . . . and the many years' experience of our engineers and designers, the results of never ending tests in our research laboratory—are all available to you! *Write, wire or phone . . . U. S. Textile is at your service!*

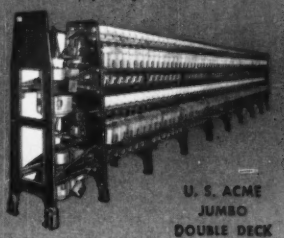
SERVICE AT THE TIME OF PURCHASE...
SERVICE OVER THE YEARS!



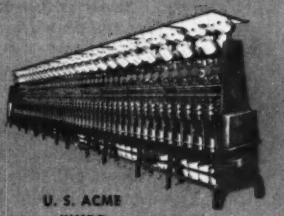
U. S. ACME
HIGH SPEED
SPOOLER
spindleless construction



U. S. ACME
FACE DRIVE TWISTER
the high speed headless
package twister



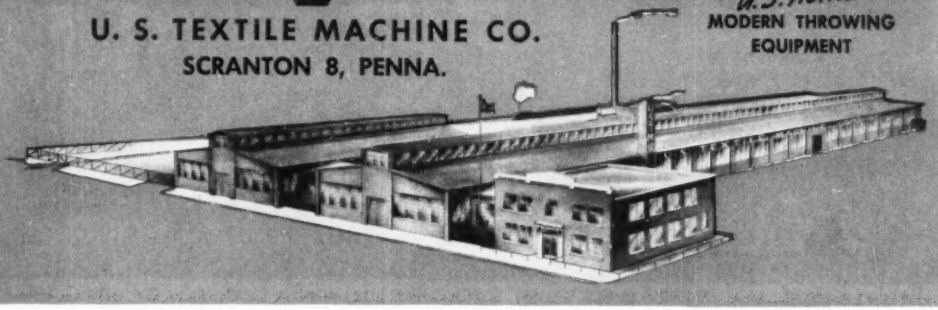
U. S. ACME
JUMBO
DOUBLE DECK
TWISTER



U. S. ACME
JUMBO
DOUBLER TWISTER

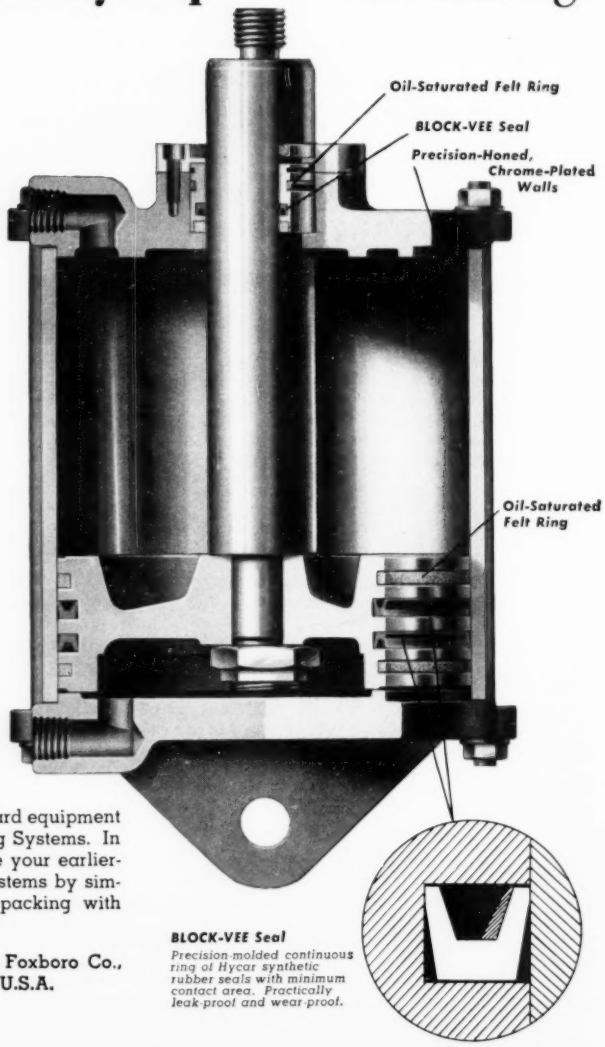
U. S. TEXTILE MACHINE CO.
SCRANTON 8, PENNA.

THE HOME OF
U.S. ACME
MODERN THROWING
EQUIPMENT



Now... unique Stabiload cylinder radically improves roll loading!

Ends stickiness and air leakage in pneumatic loading



Designed specifically for Foxboro Pneumatic Loading Systems, the new Foxboro STABILOAD Air Cylinder now makes possible more-accurate and more-uniform moisture extraction . . . safely permits higher nip pressure . . . than ever before could be obtained with loaded rolls.

Through use of the exclusive Block-Vee Piston Seal and precision-honed, chrome-plated cylinder wall, Stabiload Cylinders are so nearly friction-free that even fractional changes in air pressure settings give immediate, corresponding changes in roll nip pressure. You'll get substantial savings in maintenance because the Block-Vee Seal never needs attention or adjustment. And the virtual elimination of air-leakage gives substantial savings in compressed air.

STABILOAD Air Cylinders are standard equipment on all new Foxboro Pneumatic Loading Systems. In addition, you can importantly improve your earlier-model Foxboro Pneumatic Loading Systems by simple replacement of piston, rod and packing with STABILOAD components.

Write for detailed Bulletin 446. **The Foxboro Co., 487 Neponset Ave., Foxboro, Mass., U.S.A.**

BLOCK-VEE Seal

Precision-molded continuous ring of Hycar synthetic rubber seals with minimum contact area. Practically leak-proof and wear-proof.

FOXBORO
REG. U. S. PAT. OFF.

PNEUMATIC ROLL-LOADING

FACTORIES IN THE UNITED STATES, CANADA AND ENGLAND

Want to buy some custom-built yarn?

Grove Silk Company in Dunmore, Pa., adds an important "extra" to your yarn. Whether they're throwing for weaving, full fashion or tricot knitting, they know how to put it in a special quality mood.

Part of the trick is in the air conditioning. They have a Carrier refrigeration system. That gives them *absolute* control of both temperature and humidity, and they can throw your yarn in the conditions ideal for your operation.

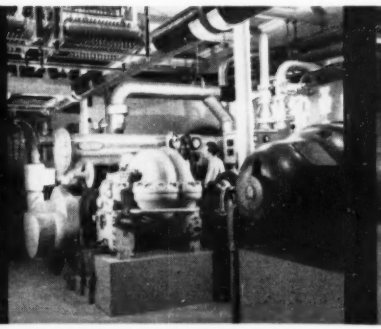
Experience shows that when weavers or knitters have the same absolute control over conditions in their mills, plant efficiencies are at their maximum. Because without temperature fluctuations, machines hold their tolerances.

It takes a Carrier system with refrigeration to give you this control. In other systems, like an evaporative cooling job, inside temperatures vary with outside weather conditions.

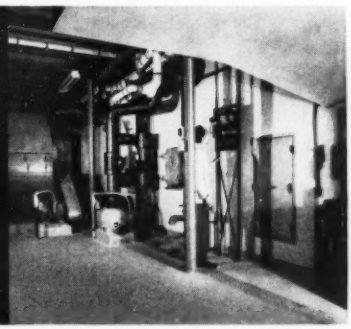
So if you're throwing, weaving or knitting, Carrier refrigeration is the soundest investment you can make. It'll bring up the quality of your cloth, reduce expensive down-time. It's a fact that it can pay for itself in a short time. Write, and we'll tell you how your present system can be switched over. Carrier Corporation, Syracuse, N. Y. . . . *for 50 years—the people who know air conditioning best.*

Carrier

AIR CONDITIONING
REFRIGERATION
INDUSTRIAL HEATING



At Grove Silk Company, this Carrier Centrifugal Refrigerating Machine chills water for the air conditioning, assures absolute control of mill conditions.



Chilled water is pumped to eight different dehumidifiers to provide individual zone control in different parts of the mill.

TYPE L

JOHNSON
Rotary
Pressure
JOINTS

An ideal answer for service on cotton slashers

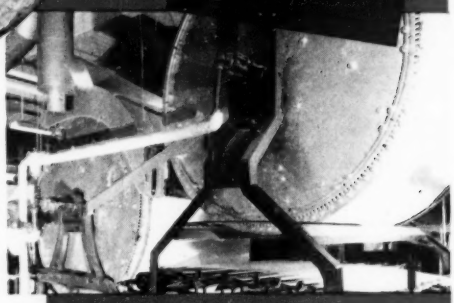
The Type L Johnson Joint has inherent advantages all its own, which make it particularly suited for use on cotton slashers. It has lugs cast right on the body, which permit the use of simple rods to support the joint.

Such an arrangement removes from the internal parts any responsibility of supporting the weight of the joint and the connecting piping. It leaves for the seal rings only their primary task of functioning as a seal, with an obvious increase in service life and further reduction in maintenance.

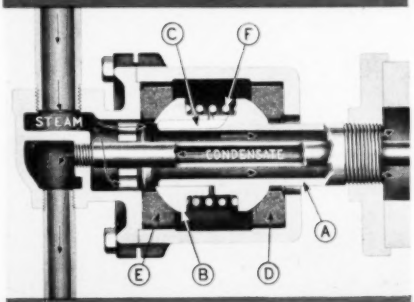
The Type L still includes, of course, *all* those basic features which *only* Johnson Joints combine. It has no packing of any kind; needs no lubrication or adjustment; has provision for lateral and angular movement to absorb misalignment.

It has an unmatched record of serving, and saving, that has made it the overwhelming favorite of mill men and machinery manufacturers. You too can switch over to the Type L with full assurance of increased operating efficiency, plus savings in maintenance that actually make it an economy move.

Sizes and styles for all needs; write for literature.



Installation pictures show Type L Johnson Joints on large cotton slashers in southern mill. Note how lugs on body permit simple rod support. These are for through-flow service; Type L is also available for siphon pipe service as shown in cross section below.



Johnson Rotary Pressure Joints

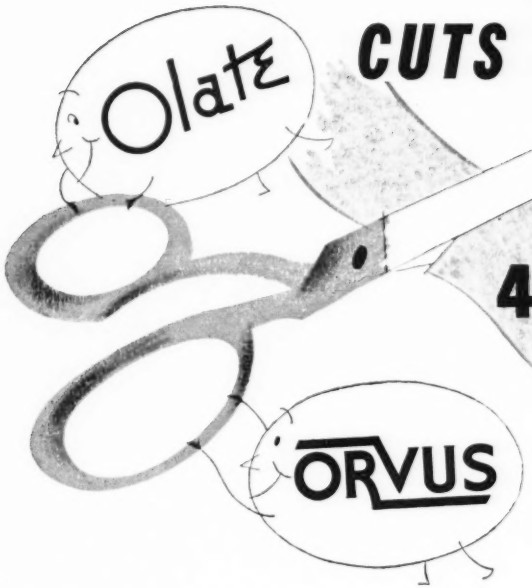
Nipple (A) is connected to roll or drum. Collar (B) is keyed to nipple at (C) but fits loosely so pressure can fill entire housing and act as sealing force. Seal ring (D) and bearing ring (E) are of special carbon graphite —eliminate all packing or need for lubrication. Spring (F) is for initial seating only.

Products of The Johnson Corporation

815 WOOD ST., THREE RIVERS, MICH.

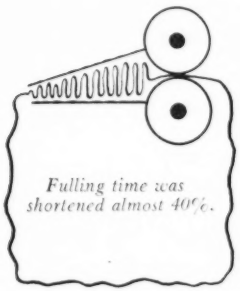
Rotary Pressure Joints • Compressed Air Separators and Aftercoolers
Direct Operated Solenoid Valves • "Instant" Steam Water Heaters

EASTERN MILL
CUTS FULLING TIME
40% WITH
OLATE-ORVUS COMBINATION

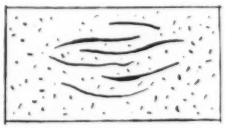


"How can we get better body for our overcoating fabrics?" a prominent Eastern woolen mill operator asked our Textile Research Department recently.

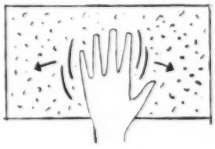
We recommended a blend of Olate and Orvus ES Paste for their fulling and scouring operations. The results were exceptionally good. The mill got the better body it was after—and several other "plus" advantages!



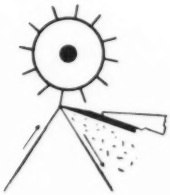
Fulling time was shortened almost 40%.



Wrinkles were eliminated.



Crocking and flocking were reduced.



Body was maintained throughout dry finishing.

And there were 20% savings in processing costs.

Have you tried Olate and Orvus ES Paste? These two time-tested products may show equally amazing results in *your* mill.

TEXTILE FINISHES SALES DEPARTMENT
CINCINNATI, OHIO

PROCTER & GAMBLE

MAKERS OF OLATE, ORVUS, PROXOL AND PROFINE

WASTE

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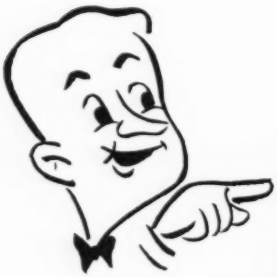


WASTE is WASTE
in any language

WE specialize in reducing and controlling waste in the textile industry. Our service is in use in mills running

COTTON, WOOL,

and

ALL TYPES OF SYNTHETICS

Our guarantee to you is a savings of at least five times the cost of the program during the first year. The average savings is twelve times its cost.

Write for a list of mills using our service – then ask them about us.

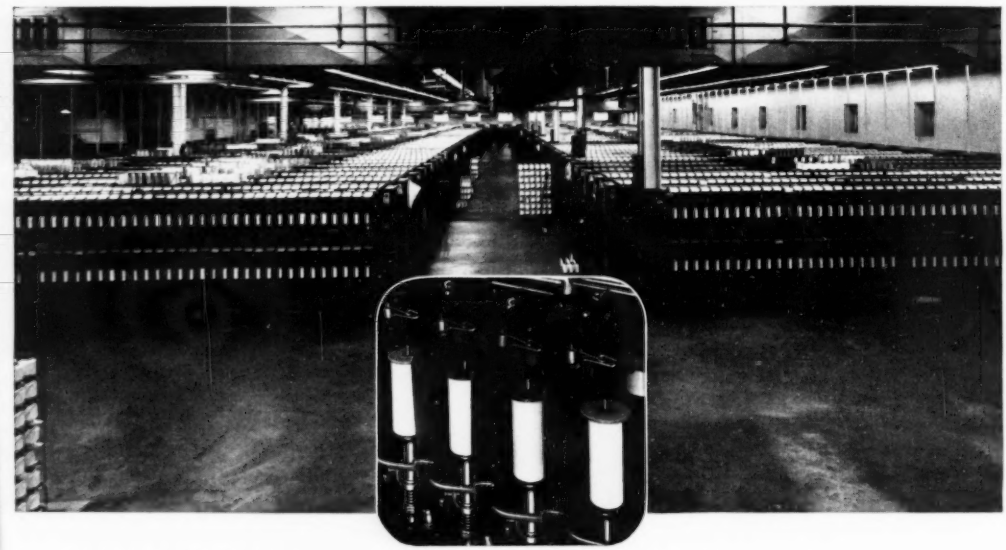
SOUTHEASTERN ENGINEERING COMPANY,

WEST POINT, GEORGIA

Marquette ROLLER BEARING SPINDLES

with FULL-FLOATING FOOTSTEP BEARING

for all textiles • COTTON • RAYON • NYLON • WOOL • WORSTED



Starting in 1946 with a single test frame of Marquette Spindles, this mill now has more than 21,000 in operation.

Not only here, but *in other mills where they have been tested,* Marquette Spindles have demonstrated their ability to produce MORE YARN at LOWER COST. They operate efficiently at high speeds with large packages, and give important savings in power consumption and maintenance.

We'll be glad to arrange for a test installation to prove that Marquette Spindles can accomplish the same results in *your* mill. Contact our home office or one of our representatives.

PROTECTED BY U.S. AND FOREIGN PATENTS AND PATENTS PENDING

The Marquette METAL PRODUCTS COMPANY

CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Representatives: C. H. WHITE, 2300 ROSWELL AVE., CHARLOTTE, N. C.; WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA.
JOHN J. HALLISSY, 58 LIVINGSTON AVE., LOWELL, MASS.; HARRY KING, GREENVILLE, S. C.

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS • PRECISION PARTS AND ASSEMBLIES
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSSES • FUEL OIL INJECTORS

News in Brief

Flammability Law. Look for a national textile flammability law to be passed by the current session of Congress. It will have the blessing of most fiber and textile groups. Although national associations basically are against legislation of this kind, it is thought better to have the law on a national level and properly phrased than to depend on legislation by various states which could create untold confusion and do little good.

Too Many Cone Sizes. The Tufted Textile Manufacturers Association, yarn manufacturers, and representatives of machinery manufacturers at a recent meeting agreed that the large number of cone sizes for yarn going to tufted textile manufacturers is creating much confusion—both in yarn mills and among machinery manufacturers. A committee was named to make a study of the problem and present recommendations at the annual meeting of the tufted textiles organization at Daytona Beach in June.

Threat of Municipal Financing. Municipally financed textile mills are a threat to the welfare of private textile enterprises, according to R. T. Stevens, chairman of the board, J. P. Stevens & Co, Inc. In a short talk given before business and civic leaders of Rock Hill, S. C., at a meeting of the company's manufacturing committee on March 25, Stevens warned against the methods used in several towns in Mississippi and Tennessee to attract textile mills by furnishing plant and equipment to manufacturers who then go into competition with privately owned mills. Government aid is a threat to private enterprise whether the government be federal, state, or local, Stevens said.

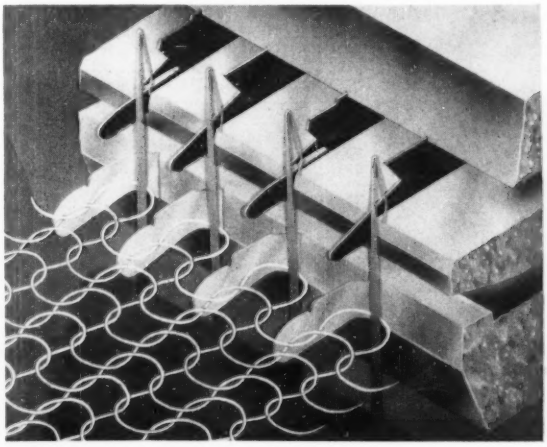
Exodus From New England Ending? Heavy plant modernization programs and new machinery acquisitions scheduled for 1952 by woolen and worsted manufacturers still located in scattered parts of New England lend support to the belief that the peak in textile egress from New England has been reached and, perhaps, halted. The trend towards labor harmony in this area is giving encouragement and inducement to remaining mills.

Change Proposed in Wool Test. A subcommittee on wool of Committee D-13 of the ASTM has tentatively revised the test for hard scoured wool with wool in the grease, and the change will be

Color Film on Full-Fashioned Machine

Story of "Reading" Machine in Color. Textile Machine Works, Reading, Pa., has produced a film titled "The Reading Full-Fashioned Knitting Machine." The 25-minute, 16 mm film in color and with sound, endeavors to reduce the complexities of a machine with 180,000 parts to a point where its operation can be easily understood by mill owners, foremen, knitters, and other hosiery mill employees.

The accompanying photo is a technical animation from the film explaining the principle of loop formation.



New Pickers for Old

Your old pickers can be rebuilt exactly like new machines. The basic design of a picker has not changed in more than 50 years, and therefore a thoroughly modern picker can be built right into the old frames at a big saving in cost. The old frames are valuable, and are just as good as new ones.

Where it is not feasible to send your pickers to us for rebuilding, we will exchange them for rebuilt pickers of the same model. Our truck delivers a new picker at your plant and takes away an old one. The new picker can be making laps the day after it is delivered.

Where pickers do not need complete rebuilding, but should have a thorough overhauling, this work can be done right in your picker room with one of our skilled machinery erectors in charge of the work.

We keep a large stock of picker repair parts always on hand, and fill repair orders within 24 hours after their receipt. In an emergency, telephone us in the morning and you can have the picker repair parts at the mill the following day, if you are within about 500 miles of Greenwood.

AldricH MachinE WorkS
Greenwood, South Carolina

submitted to letter ballot. Method D584 was revised, and the three objectives in revising are: to provide a procedure for testing wool samples composed of short fibers, such as half-inch core samples; to expand the scope of the method to include determination of burr and other vegetable matter in the sample after scouring; and to improve the present method wherever possible. The revised method includes two parts: one for use with short-fibered wool samples; the other for use with all other samples.

Develops Way to Border Sweater. A new process for applying the border to a sweater has been developed by Bergman Knitting Mills, Philadelphia, Pa. The process is called "Eternalock." A triple-stitching method is used and employs a sewing machine already on the market.

Turnabout. With the recent wage cut (accepted by the unions) in the northern full-fashioned hosiery industry, southern manufacturers say their labor costs are now about 15-20 cents a dozen higher than those of their northern competitors. Although some southern mills have reduced wages, the majority have not; those which have not reduced wages and are not unionized contend that they have the same fringe benefits as northern unionized mills. Southern non-union mills say wage reductions play into the hands of organizers, which is all the union needs to begin a more active campaign in the South.

Cotton Exchange Adopts Contract Changes. Members of the New York Cotton Exchange have approved amendments to the Exchange's by-laws, which change its contract as follows: Non-rain-grown cotton in the grade of SLM, white, or extra white, with staple one and one-sixteenth of an inch or longer, will be deliverable. Prior to the change, non-rain-grown cotton could only be tenderable on

News in Brief

contract in grades of Middling and above, white or extra white, and in staples of one and one thirty-second of an inch or longer.

Servicing OPS Expensive to Industry. Testifying before the Senate banking committee, Ellison S. McKissick of the American Cotton Manufacturers Institute disclosed that a cross-section survey covering 10 per cent of the industry's spindleage showed the two-million spindle segment had paid out more than $570,000 during 1951 because of OPS regulations. The figure represented bookkeeping, accounting, and legal fees alone, not taking into account the time of top executives, to keep up with OPS regulations, interpretations, and adjustments. He cited an instance wherein one company was

Stevens Officials Are Hosts to Rock Hill Business Leaders

The Manufacturing Committee of J. P. Stevens & Co., Inc., meets once a month to discuss production methods and manufacturing policy. Four of these meetings each year are held in towns where mills of the group are located.

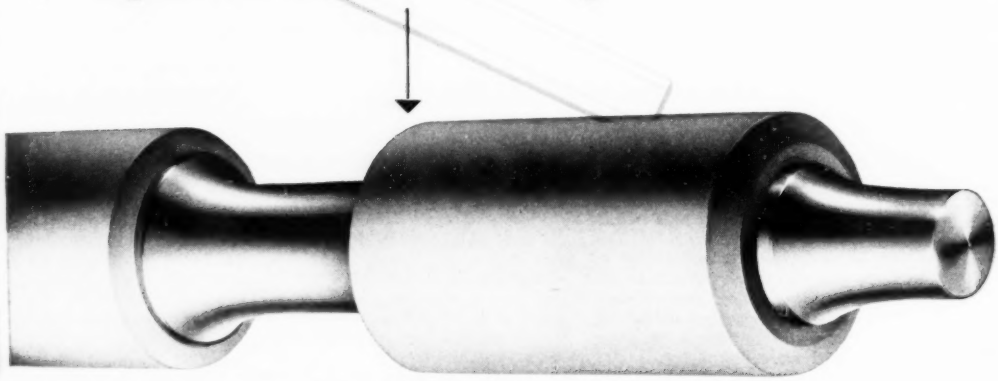
When the meeting was held in Rock Hill, S. C., on March 25, the Industrial Cotton Mills and the Aragon Plant were hosts at a dinner for local civic leaders and out of town members of the Stevens organization. The assembled group heard addresses by R. T. Stevens and R. G. Emery, of the mill group, A. W. Huckle, Rock Hill business man, and C. H. Albright, mayor of Rock Hill.

Expertly handled and radiating good feeling between mill management and local business men, the dinner was a masterpiece of good public relations.

Seated at the head table in the accompanying photo are: George P. McClenaghan, vice-president and director, J. P. Stevens & Co., Inc.; R. T. Stevens, chairman of the board; A. W. Huckle, Rock Hill business leader; J. Wilbert Wood, vice-president, J. P. Stevens & Co., Inc.; R. G. Emery, executive vice-president and director; C. H. Albright, mayor of Rock Hill; and W. J. Carter, executive vice-president and director. In the foreground, are C. M. Pitts, Industrial Plant; Hunter Hughes, associate editor, TEXTILE INDUSTRIES; and M. H. Ramsey, Jr., assistant superintendent, Industrial Plant.

It is possible to separate the visiting sheep from the Rock Hill goats by the beards and mustaches on the goats. Rock Hill is celebrating its 100th anniversary, and all local men are growing beards for the celebration in May.

"Drafting Tools" that draw a pretty production picture!



THE NEW, IMPROVED DAYCO COT

HIGHER FIBER REPELLENCE!

CUTS LABOR COSTS!

STOPS TIME-OUTS FOR ENDS-DOWN AND LAP-UPS!

If you're using ordinary cots now, look for *years* of extra cot life, when you switch to Dayco! For this new "spinner" gives even more service than the former Dayco Cots — and *they've* become famous throughout the textile industry for exceptional life.

The improved fiber repellence of the new Dayco Cot means fewer lap-ups, fewer ends-down, cleaner yarn. And talk about versatility — you can use it on cotton, wool, blends or synthetic fibers!

An entirely new compound of American Rubber goes into this new Cot, to give you non-stop performance that slashes the non-productive labor costs of handling ends-down, lap-ups. Try the new Dayco Cots on your frames, and see for yourself!

THE DAYCO LONG DRAFT APRON

SPEEDS PRODUCTION!
SAVES STARTING TIME!
CUTS MAINTENANCE COSTS!

Single Apron System

Two Apron System

Even on Monday mornings, you just turn on the power and spin — if your frames carry Dayco Long Draft Aprons! No false starts — no warm-up period before you can start production.

The Dayco Long Draft Apron yields up to 10% more uniform yarn. And you can't match it for precision — caliper it against the best aprons now on your frames, and you'll find the Dayco excels in uniform thickness, diameter, and width. You'll get a perfect fit, too, regardless of age or type of cradle, from Dayton's exclusive method of marking for 2-apron systems.

Try the Dayco Long Draft Apron, and you'll agree with the Overseer who said, "First apron I ever saw, you wouldn't lose a few when starting up!"

As pretty as a picture is the world's greatest fashion artist — the American woman who graces the lovely fabrics spun and woven in America's textile mills.

Dayton Rubber
Since 1905
TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

©D. R. 1952

DAYTON RUBBER COMPANY, Textile Division, Woodside Bldg., Greenville, S. C.

SONOCO

Makes PAPER TUBES for every Textile need

YARN TUBES

Range of sizes – I. D. ¼" to 2" length ⅛" to 13"

—for yarn, thread, twine or cord in a choice of smooth, corrugated, embossed, velvet or Unitex finishes. Yarn tubes are also available in 12 colors of paper for identification. They can also be lacquered in colors on one or both ends, and scored and printed.

SONOCO'S vast tube making facilities can produce spiral, convolute, parallel or drawn tubes. Dimensions range from ¼" I. D. to 24" I. D. in lengths from ⅛" to 300" or more —any practical wall thickness. In colors, various surfaces and embossed, treated, perforated, or printed. All dimensions can be controlled to well within commercial limits of uniformity or, to precision accuracy if desired.

BALL WARP CORES

For use with SONOCO'S Aluminum Ball Warp Mandrel which produces a better warp. Also for conventional use. Cores are uniform—lightweight—returnable.

LOOM TUBES

A heavy duty reusable tube for winding cloth on the loom. Available in various lengths and inside diameters with wall thickness according to specifications. Rough or smooth outer surface, specially treated ends.

Other Textile Tube Specialties

- Straight Side Bobbins
- Cloth Tubes
- Roving Tubes
- Topping Roll Covers
- Underclearer Covers
- Tie-in Tubes
- Temple Roll Cores
- Mailing Tubes
- Loom Beam Repair Tubes

Precision Paper Products

If it's a paper tube Sonoco can make it

SONOCO PRODUCTS COMPANY

MYSTIC CONN. | HARTSVILLE S. C. | BRANTFORD ONT.

DEPENDABLE SOURCE OF SUPPLY

advised by its auditors that it would require 1900 man hours or about 50 people at work for a week to prepare some new price information requested by OPS. The full time and thought of the industry's executives should be available these days for the stimulation of business and the promotion of sales, he said. One Alabama manufacturer commented that "the textile industry and the American economy need price controls like a hog needs a side saddle" and that for OPS to call key executives to Washington conferences on meaningless price ceilings at a time when these men should be tending to business amounts to "throwing a drowning man a rock instead of a rope."

Stretch in German Swimwear. A German firm, Richard Rothmaier, has introduced some novel Perlon swimsuits under the trade name "Romira." Although having considerable stretch, no rubber thread is used, the elasticity being produced by special yarns of combined S- and Z-twist.

Nep Standards. Committee D-13 of the ASTM is seeking a standard which defines a nep and proposes a method of nep identification that can be easily and consistently used by all technicians in the industry. Groups are working also on standardization of determination of other cotton fiber properties such as length, strength, and fineness.

Minimum Wages for Woolen and Worsted Industry. A public hearing will be held by the Secretary of Labor on May 15, 1952, to consider the redetermination of prevailing minimum wages for the woolen and worsted textile industry. The union has asked the Secretary to include certain "fringe" benefits within the new determination of "prevailing minimum wages."

Canada Refuses Textile Immigrants. Canada's Immigration Minister Walter Harris and Labor Minister Milton Gregg have assured Ontario textile union officials that Canadian immigration officials in Europe will refuse applications from textile workers until further notice.

Rayon Rules Clarified. Chairman of the Federal Trade Commission has announced that rules for the rayon and acetate textile industry, which became effective February 9, are subject to clarification regarding current inventories, invoicing, and linings of wearing apparel. The FTC's Bureau of Industry Cooperation has prepared the necessary new rules for clarifying the old rules.

Butt-End Seams. An East Ger-

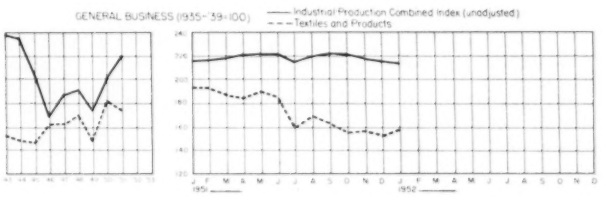
(*Continued on page 221*)

News in Brief

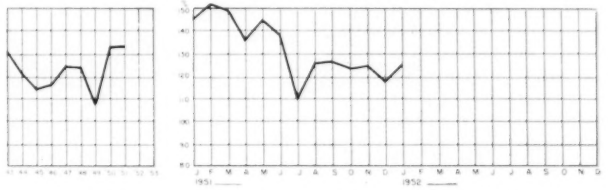
Textile Industry Activity Charts

Source of information: Bureau of the Census, U. S. Department of Commerce; National Association of Hosiery Manufacturers.

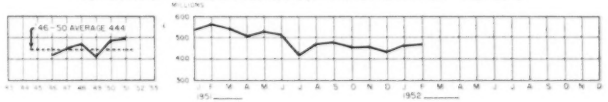
GENERAL BUSINESS (1935–'39=100) — Industrial Production Combined Index (unadjusted); - - - Textiles and Products



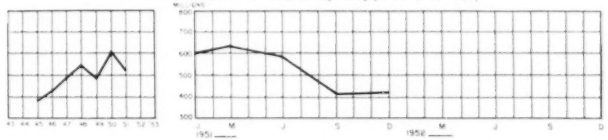
COTTON SYSTEM SPINNING ACTIVITY—(ALL FIBERS) % of Capacity, (6-Hour Day)



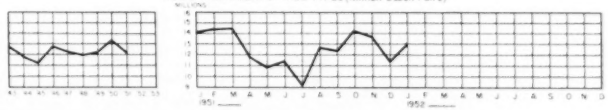
COTTON SYSTEM AVERAGE SPINDLE HOURS (Millions) PER WORKING DAY—ALL FIBERS



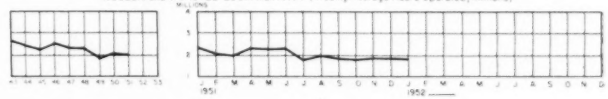
RAYON BROAD WOVEN FABRICS (Quarterly Average, Million Linear Yards)



HOSIERY SHIPMENTS—ALL TYPES (Million Dozen Pairs)



WOOLEN and WORSTED LOOM ACTIVITY (Weekly Average Hours Operated, Millions)



AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

Foreign Trade and "Distressed" Aid

IT APPEARS that one of the key events, from the standpoint of foreign trade in textiles, will take place September 17 when a conference will begin among the textile industries of the United States, Great Britain, India, and Japan.

A preliminary announcement was made several weeks ago by the American Cotton Manufacturers Institute, which indicated that an official invitation had been received from the Cotton Board of the United Kingdom to participate in such an international cotton textile conference. In its news release, the Institute noted that this question had previously been considered by the ACMI Board of Directors and its Foreign Trade Committee.

This is not the first time that American textile manufacturers have sat across the table from their counterparts in other countries. In the late 1930's, for example, a Mission went to Japan to try to work out some means for a more orderly distribution of the tremendous yardages of Japanese cotton goods. In more recent years, a Mission composed of the late William P. Jacobs of ACMA, Donald Comer of Avondale Mills, and Fred W. Symmes of Greenville, South Carolina, made up a somewhat similar Mission, which advised with General Douglas MacArthur on this difficult problem. This Mission was made in 1947.

The following year a much larger Mission went to England and conferred with the British on questions of international importance. Bringing the story still further up-to-date, a 1950 Mission, which was headed by Robert C. Jackson, executive vice-president of ACMI, went again to Japan for conferences with General MacArthur and Japanese textile leaders.

Thus, there is plenty of precedent for the international conference in September. Those who have doubted its advisability have asked what could be accomplished by such a meeting. In rebuttal, those who have favored the conference have asked what could be lost other than the expense money of the delegates.

All who have considered the question seem to agree that the world textile situation is badly in need of some sort of remedy, and whether or not the September conference can provide the necessary tonic, can only be determined after the meetings are held. In short, it is mighty hard to predict whether the doctor can cure the pneumonia patient, but just because there is some doubt about it, few pneumonia patients are willing to forego calling the physician.

Cuba and Burlap

The Cuban question and the burlap question give us two sides of a picture which is causing trouble in the field of foreign trade.

Cuba, land of Cuba libras and revolutions, has not been happy with American textile manufacturers. As we have written before in this column, the Cuban textile industry is not nearly large enough to supply the needs of the Cuban people but, in spite of this, the government has placed such a high tariff on American goods that their prices have gone sky-high.

Those who follow this question closely have been speculating for some weeks as to what effect the recent overthrow of the Cuban government would have. The feeling seems to be that the Batista group could certainly not be any more antagonistic than the government which preceded it, and

Labor Rulings

Yarn manufacturer, as supplier of goods for worsted manufacturer, was "substitute" manufacturer also liable for Walsh-Healey Act violations, since practice in textile industry is for woolen contractors to produce their own yarn, according to Examiner's decision.

Clear and unequivocal request to bargain is necessary before there can be a finding of refusal to bargain. Union's request for discussion of certification proceedings did not support Trial Examiner's finding that the employer refused to bargain, according to NLRB.

that perhaps the time has come when Cuban manufacturers and American manufacturers should sit down over a box of Havana cigars and discuss things.

The burlap question is the other side of the picture. Just recently the Indian government has reduced by 50% its *export* tariff on burlap and, according to some of the manufacturers of cotton sheetings used by the bag trade, this is just about going to finish them off. They claim that it was almost impossible to compete with burlap on a basis of old tariff and that the 50% reduction kills the cat. This, of course, is a tariff which was levied by the Indian government presumably as a revenue measure and we, in this country, can have no voice in their raising it or lowering it.

So there we have the two sides of the picture. The Cubans are quarreling with us because we are sending too many yards of textiles into Cuba, and we are unhappy with the Indians because they are sending too much burlap into America. Maybe what we need is a gigantic conference which would include all nations in the world, and maybe while we have them all together we could settle the Korean dispute. This is, indeed, a complicated time in which to try to make a living.

Distressed Areas

Last month we had a few things to say about the government's proposal to channel defense contracts into areas in which there was excessive unemployment, and since that time rather extensive hearings have been held in Washington on this question.

One of the briefs which argued in favor of such a distribution, compared the current textile situation with an imaginary drama in which five soldiers found themselves stranded in the desert with only one canteen of water. The point was made that the soldiers should share the water so that all could live to fight another day. To make the circle complete, it was argued that New England with one-fifth of the cotton system spindles is in the position of the fifth soldier.

When are we in this country going to realize that for the long pull nobody, whether he represent management, labor, or the government, is going to prosper unless he is going to dig for prosperity? *To ask the government for help now is to refute all of the claims which the textile industry has made for the authority to stand on its own feet.*

Cotton Spinning Activity

You may have noticed from the government reports that during the month of February the cotton spinning industry operated at 127.3 per cent of capacity, based on 19-2/3 days of 16 hours each. This compared with 152.0 in the same month a year earlier and 125.8 per cent in January, 1952.

The startling part about this news is that textile capacity, at least in the cotton mills, increased from January to February, 1952. This increase came about at a time when prices were more than 25 per cent below a year ago, when margins were down around 40 per cent, and when there was generally a great deal of wailing and gnashing of teeth.

Of course, the spindle activity figures bear out the Census figures on cotton consumption, which also showed that more cotton went through mill opening rooms in February than in January. Neither set of figures, however, tells why.

As a matter of fact, the current "depression" in textiles cannot be measured by indices of activity. Many mills are operating to keep their labor force and many mills are also operating because they lose less money manufacturing for inventory than they do by standing idle. The real measure of the depression may be found in the story on yarn and cloth prices and in the story on mill margins.

Both are sad, sad stories, but this writer is hopeful of an early change for the better.

May 12-17—National Cotton Week, sponsored by National Cotton Council.

May 15-17—Third annual convention, American Cotton Manufacturers Institute, Inc., Haddon Hall Hotel, Atlantic City, N. J.

May 15-17—Annual outing, Carolina Yarn Association, Carolina Hotel, Pinehurst, N. C.

May 16-17—Semi-annual convention, **National Association of Woolen and Worsted Overseers,** Carders Guild Section, Narragansett Hotel, Providence, R. I.

May 22-24—Annual meeting, American Society for Quality Control, Syracuse N. Y.

May 29-31—Annual convention, South Carolina Textile Manufacturers' Association, The Cloister, Sea Island, Ga.

June 2-7—Annual conference, Textile Institute, Assembly Hall, Edenburgh, Scotland.

June 12-14—Annual meeting, Southern Textile Association, Ocean Forest Hotel, Myrtle Beach, S. C.

June 23-27—Annual meeting, American Society for Testing Materials, Hotels Statler and New Yorker, New York City.

Sept. 8-10—Third National Standardization Conference, sponsored by the American Standards Association, Museum of Science and Industry, Chicago, Ill. To be held in conjunction with Centennial of Engineering.

Sept. 9-13—7th National Chemical Society Exhibit, the Coliseum, Chicago, Ill.

Sept. 10-11—Fall meeting, The Fiber Society, Inc., Princeton, N. J.

Sept. 11-13—Third Canadian Textile Seminar, Queens University, Kingston, Ontario, Canada (previously scheduled for Sept. 18-20).

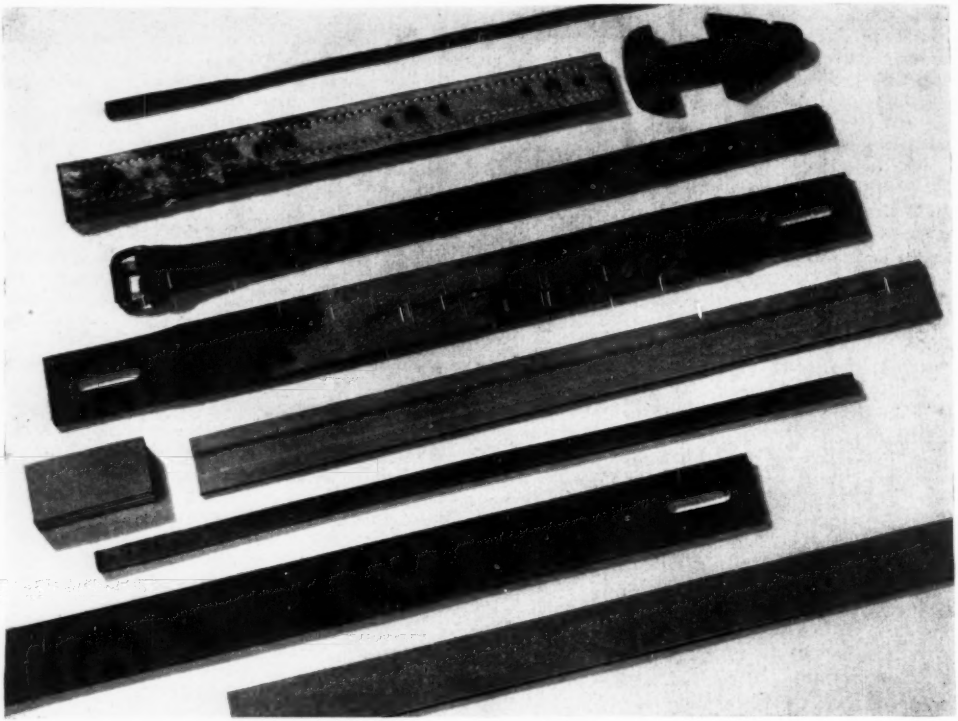
Sept. 25-26—Annual convention, National Association of Cotton Manufacturers, Wentworth-by-the-Sea, Portsmouth, N. H.

Oct. 6-11—Seventeenth Southern Textile Exposition, Textile Hall, Greenville, S. C.

Oct. 16-17—Annual convention, The Quartermaster Association, Biltmore Hotel, Atlanta, Ga.

Nov. 6-8—31st annual convention of the American Association of Textile Chemists and Colorists: also the textile dyeing and finishing exposition. Hotel Statler, Boston, Mass.

Nov. 19—34th annual meeting, American Standards Association, Waldorf-Astoria, New York, N. Y.



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LEATHER LOOM STRAPPING

Fast Deliveries!

Strapping in all styles and sizes now expertly made both in Charlotte, N. C. and Danielson, Conn. Immediate delivery from closest point.

Only the very best **HIDES** are used by Jacobs.
Careful control of **STORING** at exact humidity.
Accurate initial **CUTTING** of blanks to order.
Individual hand **CALIPERING** and classifying.
Custom cutting and **SHAPING** to customers' order.
Jacobs "Verybest" **EMBOSSING** for identifying.
A critical final **INSPECTION** before shipping.
Prompt service on **SHIPPING** eliminates delay.

***"Verybest"* IS MORE THAN A NAME, IT IS A STATEMENT OF FACT.**

THE BULLARD CLARK CO.

JACOBS

SOUTHERN DIVISION
Charlotte, N. C.

NORTHERN DIVISION
Danielson, Conn.

NEW Equipment AND MATERIALS

Loom Harness Accessories by Steel Heddle

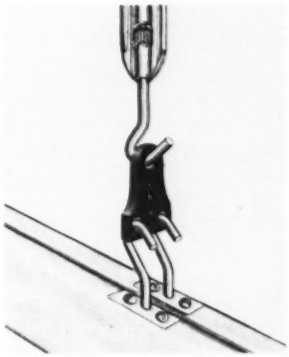
Rapid wear of both studs and slide hooks used on slide hook frames is said to be eliminated when a new swaged type stud, designated the No. 10 F, is utilized. The stud has a smoother bearing area that is considerably greater than the old No. 10 D stud, the manufacturer claims.

Another development is the "Fibre Twin Coupler" for use in combining harness frames equipped with outside hooks instead of outside eyes. Made of fibre instead of metal, it is designed for use with $\frac{3}{8}$" thick frames.

Steel Heddle Manufacturing Co., 2100 W. Allegheny Ave., Philadelphia 32, Pa.

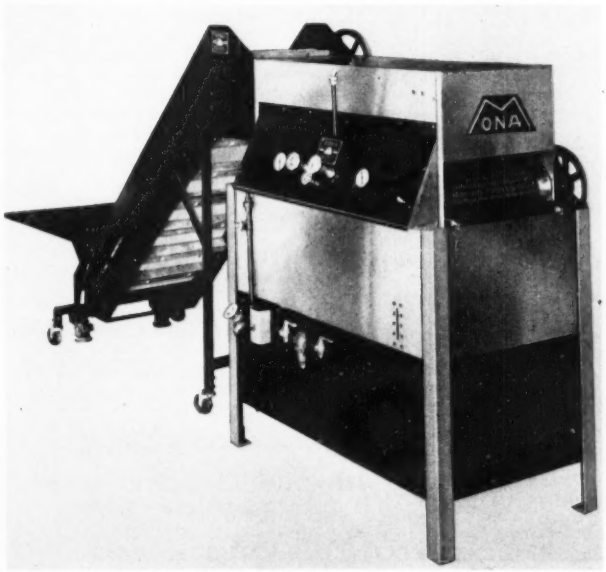
For additional data, request item E-102, using business reply card on page 220.

The No. 10 F stud.



The "Fibre Twin Coupler."

Cold-Water Yarn Conditioning and Twistsetting Machine Made in Several Sizes



A cold-water yarn conditioning and twistsetting machine now on the market is suitable for yarn on bobbins and quills or for yarn on cones or other large packages.

For conditioning of bobbins and quills the yarn is fed into the machine by a conventional hopper and feeding conveyor unit. For conditioning of cones and large packages the mobile feeding unit is rolled aside, so that the operator can feed the packages into the machine by hand.

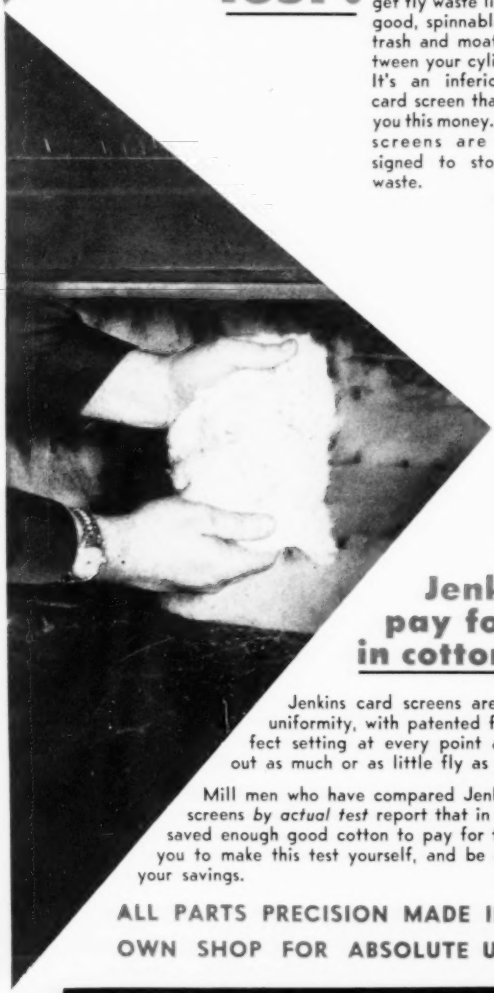
The "Monalit-Duplex" conditioner is of stainless steel construction and is described as "drip-proof." All sides are enclosed, and all controls can be operated from the outside.

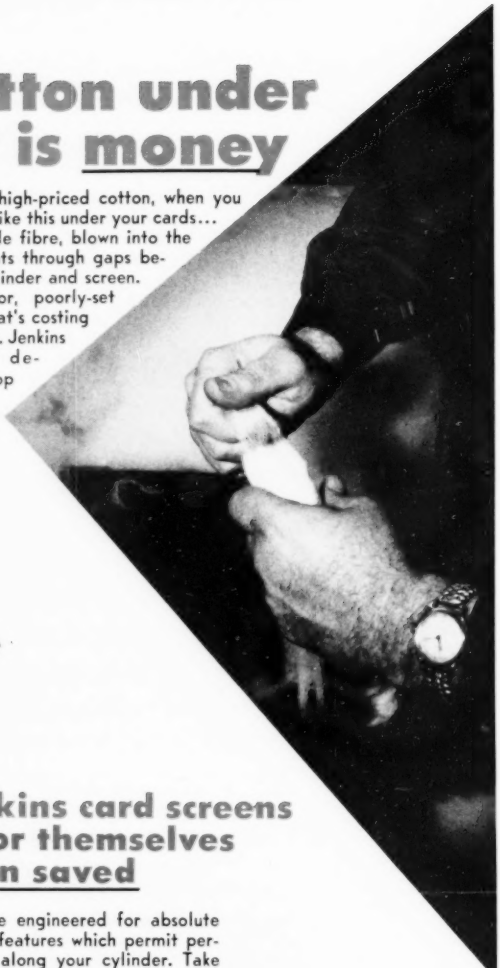
Stainless steel mesh conveyors permit perfect spray, it is claimed, both from the top and at the same time from the bottom, thus assuring conditioning of the entire yarn package in one operation.

For easier servicing and cleaning the unit is of a three-section, lightweight construction. The mobile feeding unit can be rolled aside,

good cotton under your cards is money lost!

You're losing high-priced cotton, when you get fly waste like this under your cards... good, spinnable fibre, blown into the trash and moats through gaps between your cylinder and screen. It's an inferior, poorly-set card screen that's costing you this money. Jenkins screens are designed to stop waste.



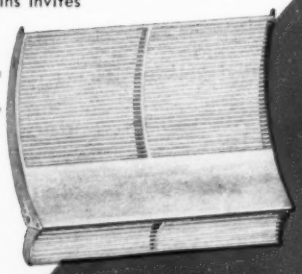


Jenkins card screens pay for themselves in cotton saved

Jenkins card screens are engineered for absolute uniformity, with patented features which permit perfect setting at every point along your cylinder. Take out as much or as little fly as you require.

Mill men who have compared Jenkins screens with ordinary screens *by actual test* report that in only one year's time they saved enough good cotton to pay for the screen! Jenkins invites you to make this test yourself, and be convinced of your savings.

ALL PARTS PRECISION MADE IN JENKINS' OWN SHOP FOR ABSOLUTE UNIFORMITY



JENKINS

ENGINEERED PRODUCTS

JENKINS METAL SHOPS, INC.
Gastonia, N. C.

whereas the entire top section of the conditioning machine (including the conditioning apron) can be lifted off the lower tank and drive section for periodic cleaning of the tank and conditioning conveyor.

Various sizes are made to conform with the mill's individual production requirements.

Mona Industries, Inc., 65-75 E. 23rd St., Paterson 4, N. J.

For additional data, request item E-115, using business reply card on page 220.

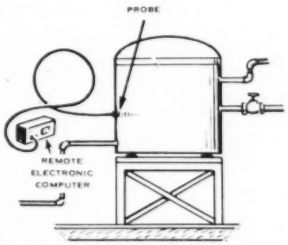
NEW Equipment AND MATERIALS

Ultrasonic Viscosimeter for Plant and Laboratory Use

Continuous, automatic viscosity measurement using ultrasonics is the outstanding feature claimed for the newly developed "Ultra-Viscoson," an instrument consisting of a probe and an electronic computer which tells viscosity at a glance.

Viscosity is determined by the use of ultrasonic waves applied to the probe, the manufacturer states. The computer converts the probe output instantly into viscosity measurements on meter, recorder or controller.

The computer (which may be located at a distance up to 1 mile from probe) provides an electrical output



that measures the product of viscosity and density in centipoises x grams per cc for Newtonian liquids (for example, castor oil). Apparent viscosity x density is measured in the case of non-Newtonian liquids (for example, starch and other slurries).

Since measurements are made in milliseconds, the readings are instantaneous in relation to any manufacturing conditions.

The hermetically sealed probe, which is the size of a fountain pen, has no moving parts and operates to 650 F, 10,000 atmospheres pressure. It may be installed permanently in pipe lines, production kettles, etc., or used in test tubes or beakers.

Multi-probe systems are also available for measurement of viscosity at a number of stations, as in the monitoring of starch cooking kettles. A separate probe is installed at each location and connected with an Ultra-Viscoson multiplex computer. Manual

(*Continued on page* 159)

New Reiner Raschel Knitter Offered in 100″ and 112″ Knitting Widths

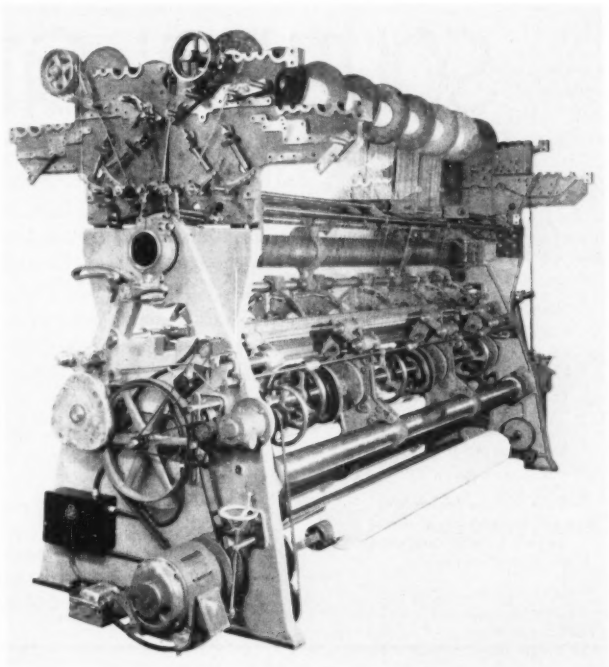
Features claimed for the new Reiner high-speed Raschel machine, Model UR-1, are:

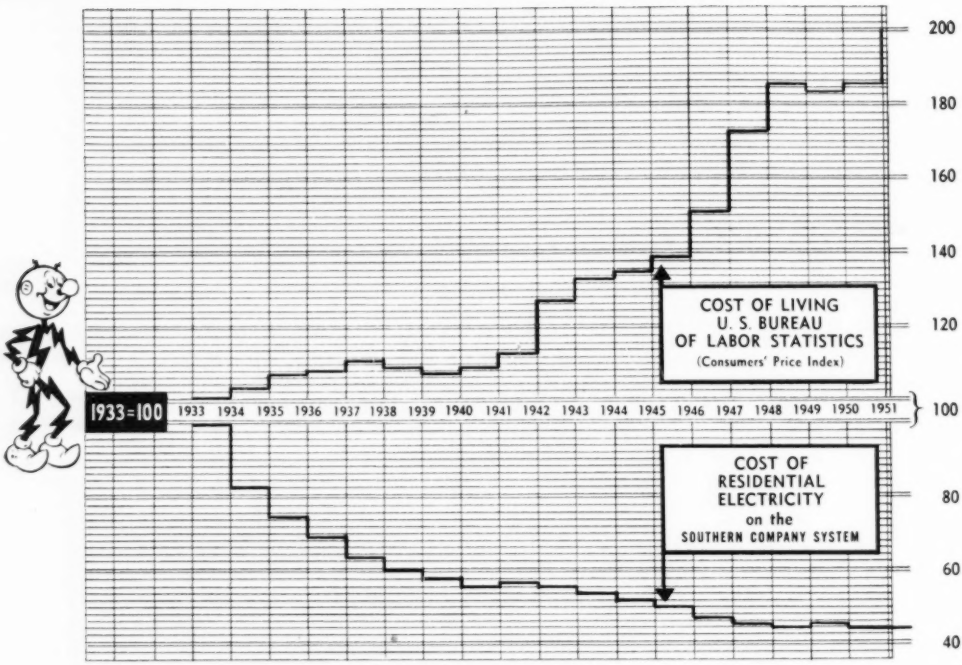
It is of rugged, vibration-free construction, eliminating the use of a center leg. All fast running shafts are supported in ball bearings, and all oscillating bearings are provided with Oilite bushings. Split box cams are employed for easy set-ups with a cam setting device, making close gauge positioning possible. All parts are readily accessible so that exchanging or interchanging is facilitated.

The machine is offered in a knitting width of 100″ and 112″ and in the following gauges: 24, 36, and 40. Up to 8 guide bars can be used and 1 or 2 needle bars. Other features are: pattern wheel or chain link drive, stitch comb for 1 or 2 needle bars, crepe attachment, a fall or chopper plate, beam feeding device for rubber fabrics and extra heavy yarn, plush points, etc.

Robert Reiner, Inc., Weehawken, N. J.

For additional data, request item E-111, using business reply card on page 220.





Here's how we're fighting inflation in SOUTHERN CITY U.S.A.

This is "Southern City," U.S.A. It's our way of expressing as a unit the vast Southeast area of 100,000 square miles and 6,300,000 people served by the four associated electric power companies of The Southern Company system.

★

Write the industrial development departments of any of the four operating companies for further information.

It looks as if almost everything is up except the cost of electricity in the home. And it's way down in Southern City, U.S.A.

The cost of electricity for residential use has been decreased in the face of a tremendous increase in the cost of living. This important advantage makes for better living in a region which still has plenty of room for industrial expansion.

New industry and modern, diversified farming go hand in hand in making Southern City, U.S.A., a better place to live and work. The four associated power companies of The Southern Company Group are helping build this new industrial empire by supplying electric power at reasonable rates.

The South and The Southern Company Group are both growing . . . together!

ALABAMA POWER COMPANY, Birmingham, Alabama
GEORGIA POWER COMPANY, Atlanta, Georgia
GULF POWER COMPANY, Pensacola, Florida
MISSISSIPPI POWER COMPANY, Gulfport, Mississippi
THE SOUTHERN COMPANY, Atlanta, Georgia

Close Figuring

A communication to our circulation department requested a 6 months subscription, instead of the usual one or 3-year plan—reason being that the correspondent was "getting on in years." We've often tried to make the hot cakes and syrup come out even, or the grits and gravy disappear simultaneously—but this fellow really has things worked out on a split second schedule.

Prevent Cotton Fires

" . . . . management of our company has shown considerable interest in the use of sodium bicarbonate as an aid to fire prevention in our cotton warehouses . . . . please send us a copy of article . . . . information on the subject. . . . . "

HUGH L. WOMACK
Ass't Plant Eng.
Patterson Mills Co.
Roanoke Rapids, N. C.

► "Dusting Cotton Bales as a Fire Control Measure" covers the subject (TI May 1951).

Lubrication

"May I please have a reprint of the article 'Profits from Effective Textile Machinery Lubrication,' Article 5 . . . . in December 1951 issue. . . . . "

C. K. HANYEN
Development Dept.
U. S. Rubber Co.
Providence, R. I.

► The six-part series covering most of the departments in a yarn plant has ended. Reprints are available upon request.

Plastic Weaving

" . . . . could give us any information about literature of weaving and finishing of plastic monofilament yarns to be used for seatcovers. . . . "

E. ter KUILE
E. ter Kuile & Zoon's
Holland

► Almost a closed subject in these parts. Everyone thinks he has a secret. Little information has been published; less than that has been accurate. TI's editors have been, seen, felt, discussed—but not written; forbidden, you know.

The Supervisor Series

"In reading the article on 'The Supervisor and His Responsibilities' in my January issue, I note that you have a footnote in regard to six articles that appeared in prior issues . . . . interested in obtaining these articles in booklet form. . . . . "

F. D. ARNETTE
U. S. Rubber Co.
Winnsboro, S. C.

" . . . . grateful if you kindly arrange to send me a copy of 'The Supervisor and His Responsibilities' . . . . will arrange payment of the same. . . . . "

TEEKAM SINGH
Swatantra Bharat Mills
Delhi, India

" . . . . very much interested in securing a copy of 'The Supervisor and His Responsibilities' . . . . "

BEN S. CONNOR
Overseer
Groves Thread Co.
Gastonia, N. C.

► The articles will be placed in booklet form when the series is completed; a limited number will be published. If you wish a copy, please notify the editors.

Nep Templates

" . . . . beg you to give us information regarding the makers of the templates for counting neps in card webs, developed by the Department of Textile Research, North Carolina State College, and mentioned in your magazine January 1950. . . . "

CARL EISERMAN
Akerlunds Bomullsspinneri
Druveforsvagen 8
Boras, Sweden

► Our understanding is that the templates are sold by Ferguson's Hardware, 2906 Hillsboro St., Raleigh, N. C.

Flash-Curing Resins

"Will you please send the address of Sill Industries, which was mentioned in Case 51 in your February, 1952, issue. . . . "

W. W. MACOMSON
Pacific Mills
Lyman, S. C.

► Story in February was about electric machine which flash-cures resin treated fabrics. Sill's address, 51 Madison Ave., New York 10, N. Y.

Baby Noise

And we're told that because each American born has a $1700 national debt is why the first sound an infant makes is a SQUAWK.

Want Designs?

"I am interested in obtaining some names of manufacturers of textiles and fabrics that might be interested in buying some free lance designs."

JACK OPELL
Sugarland Road
Washington, Indiana

► Anyone desiring to do business with Mr. Opell can contact him direct at the above address.

The Chart

" . . . please send us one copy of the chart . . . American Textile Industries. . . "

BRASCHLER & CIE.
Zurich
Switzerland

► The chart listing number of mills and employees by states and classification is available. Demand was great and another run made.

Washington Jargon

For this inside dope on Washington language, we are indebted to Secretary of Commerce Charles Sawyer:

The office—"The Shop"
Delay—"Drag your feet"
Postpone—"Phase it out"
Handle definitely—"within a certain framework."
Discrepancy—"A short fall"
Not enough—"In short supply"
Study group—"Task force"
Specific problem—"ad hoc detail"
Conclude job—"Finalize it"

Remarkable Resistance

You have to see a Textile Spring-Beard Needle in action to realize its remarkable wear resistance. Superior tempering, a special steel formula and rigid scientific controls — automatic and electronic — produce exactly the right combination of hardness and flexibility for the job a needle must do.

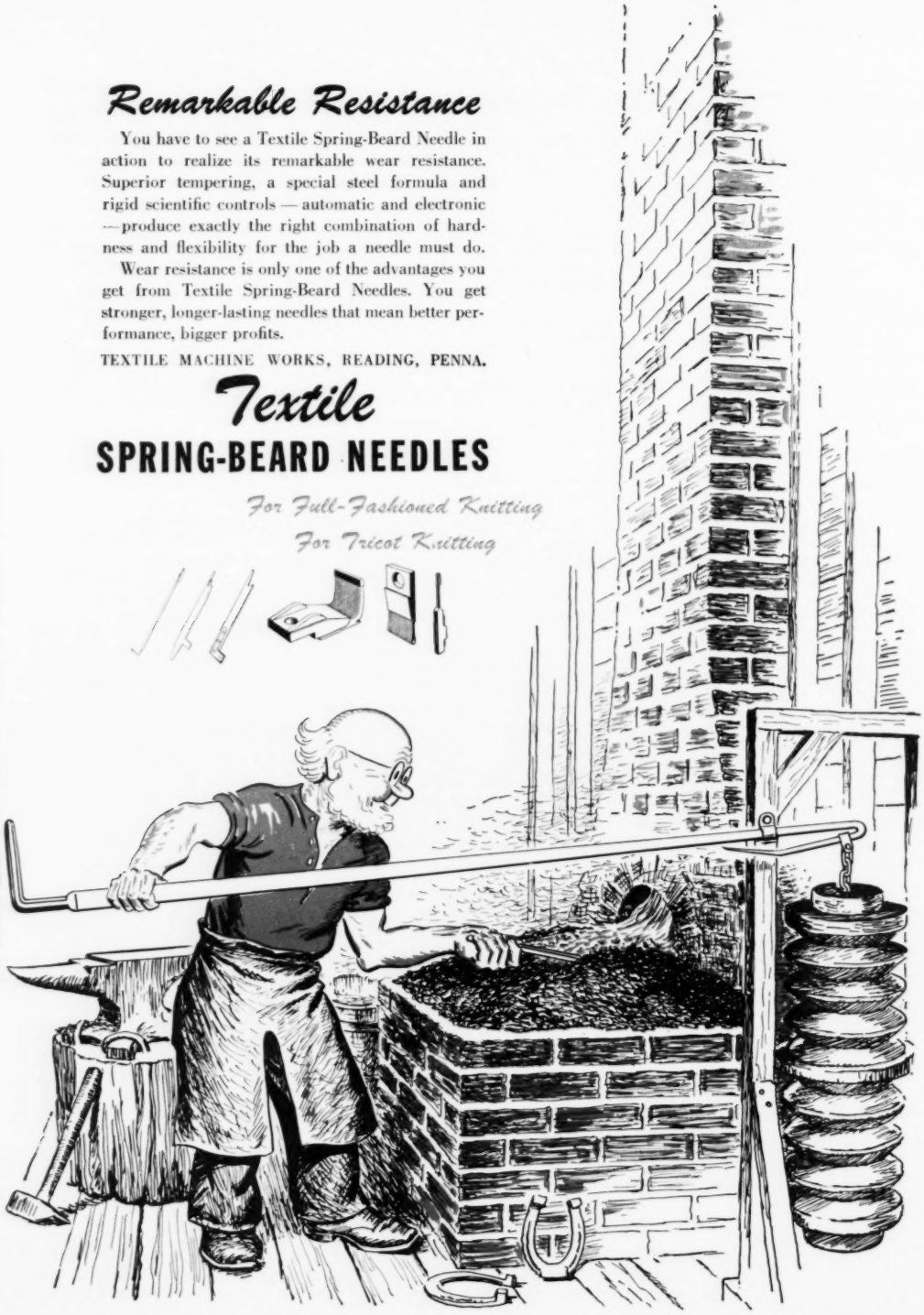
Wear resistance is only one of the advantages you get from Textile Spring-Beard Needles. You get stronger, longer-lasting needles that mean better performance, bigger profits.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile
SPRING-BEARD NEEDLES

For Full-Fashioned Knitting

For Tricot Knitting



Champion Winder Operator

claimed by Hyde Park Mills

Staff Prepared

HYDE PARK MILLS, Inc., Covington, Tenn., claims the distinction of having the world champion winder operator. The young lady, shown operating a winder on plied yarn, has consistently broken all production records on various counts of yarn on different makes of winders. Her production averages 50% (conservatively) more than standards established in this mill, and some of the experienced winders do not reach the established standards.

The champion winder's name is Christine Rickman, and she is shown operating an 18-spindle Model 50 Universal winder on 7s three-ply yarn, making 3-lb cones on piece work. In this instance glue is used to piece yarn breaks, but she works much faster on yarn which requires tying. Her winding task is usually confined to an average of 4s cotton count yarn; however, the finer the yarn, the better she likes it. In this operation she can wind 900 to 1000 lb of yarn in 8 hours with ease.

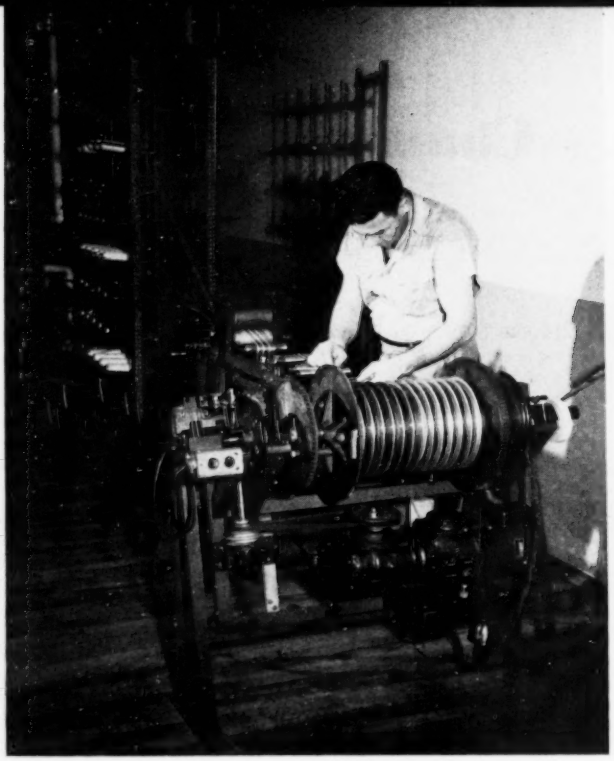
Management at this mill is confident that Christine is the champion, and if you think one of your operators can top her production, the management extends an open invitation to challengers on any winding machine and on any counts of yarn. J. A. Conner, general manager at Hyde Park, will send the young lady anywhere in the United States or Canada to compete with anyone, or any challenger is welcome to come to Hyde Park to contest the "Winder Queen's" dexterity.

Christine was a "natural" from the start of her career as a winder operator about ten years ago. She is the mother of one child, and has served as the best instructor of JIT (job induction training). She first learned to wind by observing another winder operator for a short time—then she literally "took over."

Equipment which duplicates production machinery is used to make narrow width fabric samples.

By NEAL TRUSLOW

Textile Division
U. S. Rubber Company



Warped and sized in one operation—

Model slasher takes yarn from the creel and prepares one inch wide strips of sized warp. Vester Smith is shown tying in a broken end.

U. S. Rubber's Novel Sample

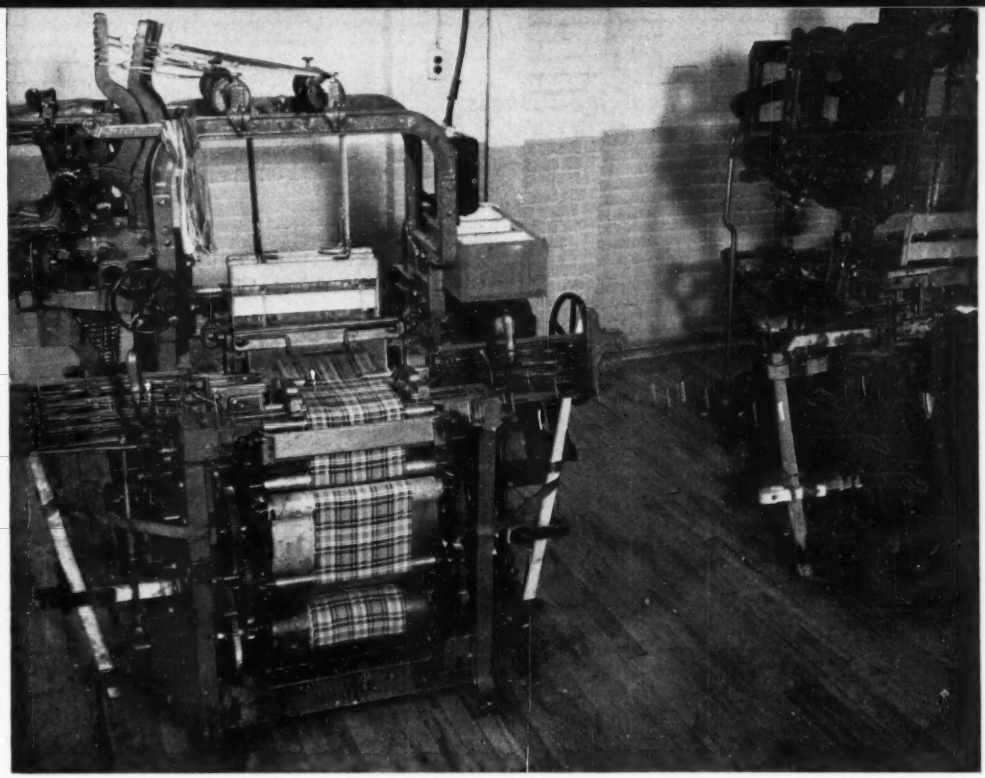
TIME AND MONEY are saved by a novel method of producing fabric samples at United States Rubber Company's Textile Development Department at Winnsboro, S. C.

Equipment which duplicates production machinery is used to make narrow width samples. Where this equipment could not be purchased from regular suppliers, it was built in the Development Department's shop.

The usual method of preparing woven samples for the textile industry is to make short warps that are woven on a production loom. At times these short warps take the form of a "blanket" in which several narrow bands, each containing a separate warp pattern, are placed together on the loom beam. These are then woven with various filling patterns as called for by the designer. As an alternative to these techniques, which tie up costly production equipment, it is sometimes desirable to have samples produced on a hand loom. All of these methods have the disadvantage of being both expensive and time consuming.

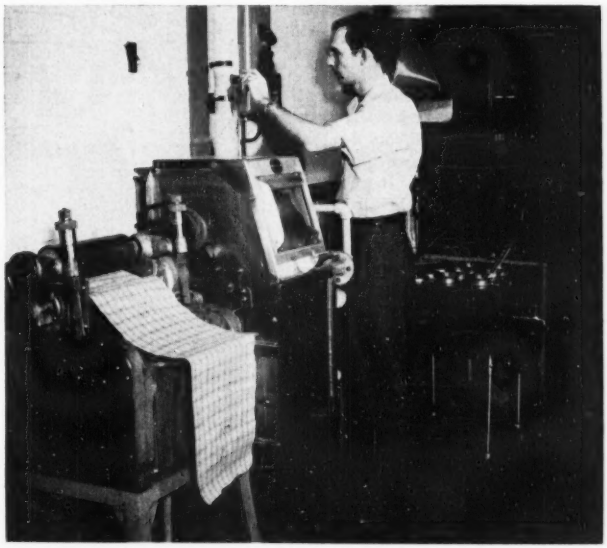
Under the system used in the Rubber Company's Development Department the fabric is designed either in its New York offices or at the Winnsboro Development Department. If a yarn which is not in production is needed, it can be made in the pilot plant, which is completely equipped to take the yarn from the baled fiber through the winding operations, including the twisting of ply yarns when so desired. Most of this equipment is full size.

Dyed yarns are wound on dye tubes and then dyed in a small package dye machine that can accommodate from one to five pounds of yarn. The yarn is dried by centrifuging and then forcing hot air through it. The yarns are rewound before warping.



Woven on the "cut down" standard loom—
Two of the narrow looms are shown weaving samples at the development department of U. S. Rubber Co.

Desized, dyed, and treated—
Chemist Charles Beach is shown operating the sample dye beck. In the background is the five-pound package dye machine. In the foreground is a narrow padder.



Method

The yarns are warped and slashed in a single operation (see accompanying illustration). In this operation enough yarn is pulled from the creel to produce a one-inch wide strip of warp. The yarn is sized and then wound on the beam, which has separated dividing rings one inch apart. It is possible to produce a 50-yard warp by this method, but usually the warps are 10-20 yards long. The operation normally is repeated eleven times to produce a warp width of eleven inches, which gives a fabric about 10 inches wide.

After drawing-in, the fabric is woven on a regular loom which

Industry and Medicine Discuss Common Cold

Industrialists, physicians, and research workers participated recently in a conference sponsored by the Common Cold Foundation.

The nation spends annually more than four hundred million dollars for drugs, hospitalization, and medical attention in the treatment of the common cold, the Foundation reported. It was pointed out that industry, non-manufacturing business, and workers lose three billion, seven hundred and fifty million dollars a year in production and wages.

Employers of large numbers of workers have probably not studied these losses due to absenteeism because of the common cold, the Foundation stated; for this reason very little money has been made available for research in this disease which disables more people than all other diseases combined.

The officers and directors of the Common Cold Foundation are said to be business men and physicians; the executive offices are at 112 East Chestnut Street, Chicago 11, Ill.

has been cut down to accommodate the narrow beam. The loom may be operated at normal production speeds, and no difficulties have been encountered in handling fabrics on it. Because of the short travel of the shuttle, a small quill should be used so that there will be a minimum length of filling yarn which needs to be straightened out to prevent loops at the selvage. Both the slasher and the loom are patterned after units in use at Clemson College.

After weaving, the fabric can be desized, dyed, and treated on the small size equipment available in the Chemical Section, as shown in the illustration [page 91].

It is possible to handle small quantities of yarn and a low number of total ends, and samples may be obtained in a short time with a minimum of waste. In some instances a finished fabric suitable for evaluation has been obtained from as little as 15 pounds of fiber. As an example of the speed at which samples can be processed, a rush request from the New York office was once received in the morning, and the fabric sample was put in the mail that evening.

Large samples of fabric also may be made. The first sample of a new shoe duck was made on the model equipment, and the shoe duck was then made into tennis shoes so that they could be tested in the field.

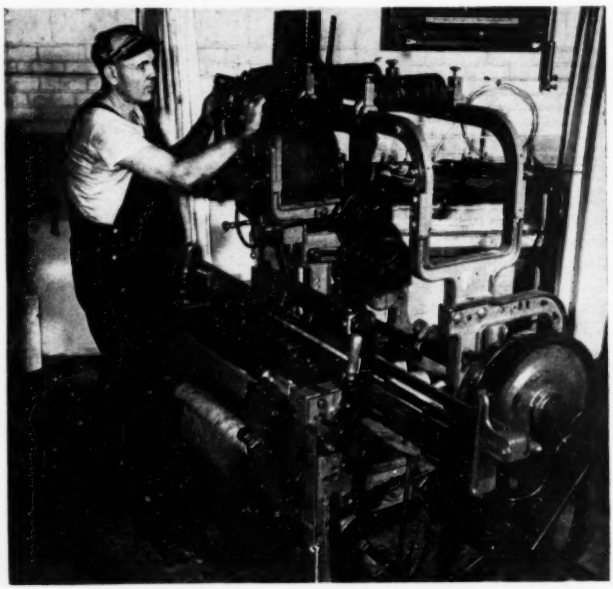
The equipment is similar to the production machinery and gives valuable information in regard to processing problems. It is possible to evaluate various sizing compounds on such new hydrophobic fibers as "Orlon" and dynel. Problems involving twist settings were first worked out with this model machinery. The information thus received was then applied to the production machinery in the mill. Still other difficulties, such as excessive warp breaks when using slub yarns, were worked out on this model equipment.

The equipment has been found sufficiently versatile to be used in the preparation of a large number of different types of fabrics. It has been used to make samples of dynel filter duck, filament "Dacron" diaphragm fabrics, spun viscose suitings, sports denims, and fire-resistant drapery fabrics. New color patterns of ginghams have been made so that the Sales Department can see if the effect is pleasing. The model equipment has proved useful in evaluating various new fibers which are all woven into standard constructions for ease in comparison. Usefulness of the equipment for both research and sales samples has been established so that better and more attractive fabrics can be made.

•

Sample loom made from production-size machine

Loom was made in laboratory shop by cutting out a portion of the center of a full-size loom. Loom fixer Gilbert Lewis is shown adjusting the dobby.



Mixed Lots of Hose Eliminated

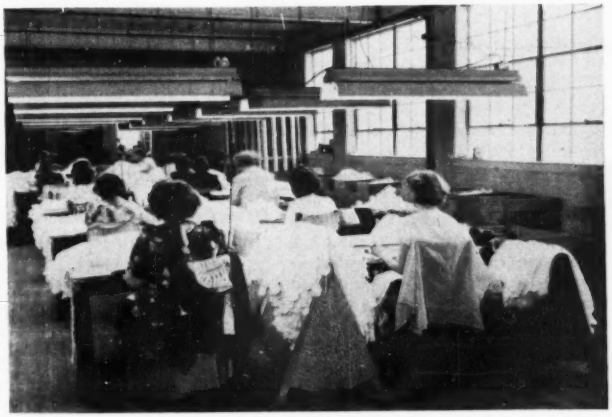
when inspectors and menders work in pairs

Staff Prepared

GREY inspectors located beside grey menders have proved to be in a better position to help keep lots of hosiery properly segregated and processed with a minimum of delay. After inspection, each stocking in a lot is stacked for the grey goods mender who gets a dozen hose at a time. After mending, the hose are placed in the same rack they came from, and they are ready to be reinspected.

The Marietta Hosiery Company, Marietta, Ga., has found this system to be the most satisfactory way to perform the grey mending and inspection operations.

If the work is laid out to be mended later, the inspector may be working on another lot when a previously inspected batch is returned, and there is a likelihood that the work may become mixed. The inspector might be working on a batch of 10s, for example, when some 9s are returned from the mender. An effort is made to keep the hose in one lot together throughout each operation, thereby avoiding mixed work and confusion. The arrangement also helps in keeping the work on a current basis.



Report on the Moroccan Textile Industry

Various firms supply the Moroccan textile mills with all the cotton yarns required for weaving. It is estimated that there are about 45,000 spindles and the number of looms has recently been increased to 1,200. Some firms are now handling filament and staple rayon, and even nylon.

This cotton industry is reported to provide only about 25% of domestic requirements. Among other things, ticks, drills, vichy, cretonnes, and serges are manufactured, but the total production of these fabrics only comprises about 10% of imports.

It is obvious that there is room for considerable expansion of the Moroccan textile industry, and two new mills are expected to start production shortly.

The knitting industry has grown considerably since the war, and in 1950 there were thirty-three firms operating about 400 machines and many other specialized machines. Almost everything knitted is produced, with the exception of stockings; but a new factory was recently opened which manufactures men's socks, and it anticipates that its production will satisfy the entire demand of the economy for these articles.

There are also seven large woolen mills in Morocco, which are half-and-half hand operated and mechanized. Yarns, blankets, carpets, furnishings, etc., are manufactured. The industry covers an important requirement, although not making the country entirely self-sufficient in production. Even so, the carpets, blankets and furnishings are exported to quite a large extent, and prove very popular within many a European home, according to reports.

Pictorial presentation of way to

Turn Rings and Plumb Spindles

By **HORACE L. PRATT** and **HUBERT R. BLUME**
Laboratory Director *Overseer Spinning*
Columbia Mills Company

WHEN one flange of a spinning frame ring becomes worn, it should be turned, and at the same time it is necessary to plumb the spindles. Although plumbing the spindles may be required when rings do not need turning, so many of the preparatory operations are similar that considerable time is saved if both can be scheduled for the same time. Also, it is logical to polish rings at the time they are turned.

The accompanying photographs show in detail the steps necessary to perform the maintenance operations. Two men should work together in turning the rings, and while the spinning overhauler is plumbing spindles, his helper may polish the rings.

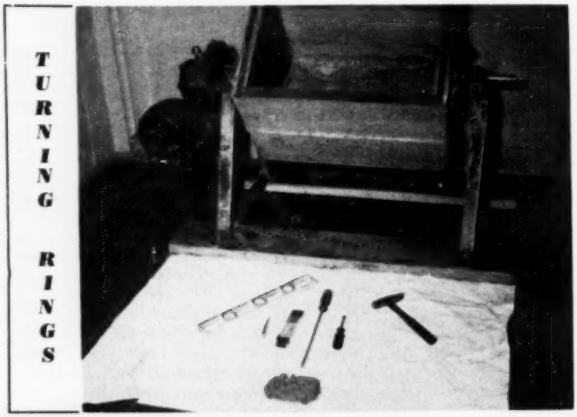
Two methods of spindle plumbing are illustrated: one for use on conventional spindles, and the other for "New Era" spindles.

Breaking-in Turned Rings

LIKE NEW RINGS, rings which have been turned require a period of breaking-in, if best results are to be obtained. Regardless of how well the rings seem to be polished, they cannot be started at the same spindle speed and with the same weight traveler as rings which have been running for an extended period. There seems to be nothing better than the traveler for putting the final "polish" on the rings.

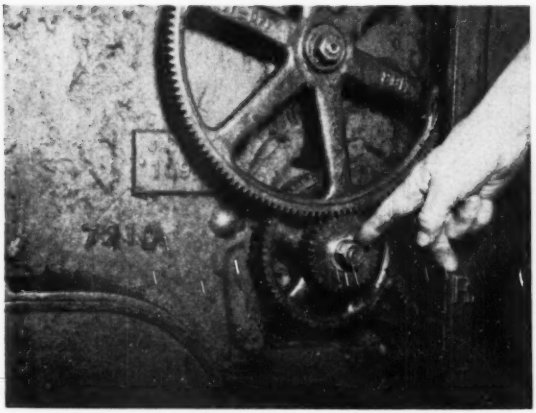
We usually reduce the spindle speed about twenty per cent and run travelers five to ten numbers lighter than the regular traveler. After the first one-half hour the travelers are broken off. Other travelers are run for one hour, then changed again. Travelers are changed again after three hours. The travelers are then changed once each shift for about one week. After one week the speed is increased about ten per cent, and if the traveler seems to be too light, the weight is increased. Usually after two weeks the speed can be increased to normal, and as soon as conditions permit, regular weight travelers are installed.

The running-in procedure greatly prolongs the life of the rings and enables the spinning to be run with a minimum of ends down.



1. **EQUIPMENT.** A spinning overhauler and a helper are needed for the job. Large mills may need two overhaulers, using one on each side of the frame. Equipment required for turning and polishing: 2 small screwdrivers (⅛ in. bit and 4-in. to 10-in. shaft); 1 tumbler for polishing rings; mixture of 25 lb of No. 8 shot or short lengths of hardened wire, 4 lb of leather meal, and 3 lb of crushed corn cobs or strips of wool felt; 1 air motor with 4-in. bristle brush (not shown).

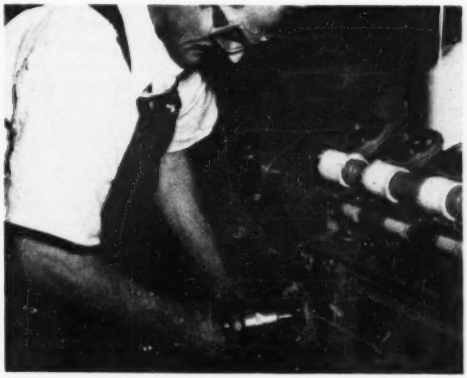
2. **SUPPLIES.** 1 set of rings; 1 set of holders, traveler cleaning pins. The rings and holders are used to replace those removed from frame. Pins are for replacement of any which appear worn when the rings are polished.



3. **FRAME IS STOPPED,** twist gear is disengaged, and frame started again to break down ends. Frame is then stopped and doffed.

4. **RACK RING RAIL** to top and break off travelers.

5. **LOOSEN SCREWS** securing ring holders, and remove holders with old rings.



6. **USE AIR MOTOR** with 4-in. bristle brush, and clean ring rail thoroughly.

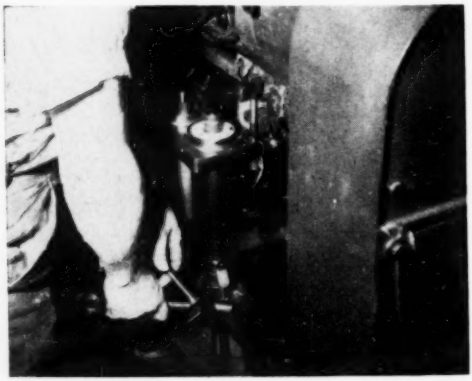
7. **SPARE HOLDERS** and rings are put in place, properly seated, and screws tightened.

8. **LEVEL RING RAIL** and see that each section is seated on T's on top of lifter rods. *(Please turn page)*

Plumbing Conventional Spindles

1. **EQUIPMENT REQUIRED.** Spindles are now ready for plumbing, and the overhauler handles this while the helper is polishing rings (see below). Equipment needed is: 1 top plug, ⅛ in. smaller than inside diameter of rings (some overhaulers prefer plugs only 1/16 in. smaller than rings); 1 bottom plug of the same size; 1 guide set; 1 spindle wrench; 1 screwdriver (about 6 in. shaft); 1 hammer (either mason's or machinist's hammer will do); 1 stand hook or similar tool for pulling bolsters from base.

2. **SUPPLIES.** Spindles, rings, traveler cleaners, and bolsters are needed to replace any which are worn. A good grade of heavy paper is also needed for packing base of spindles. An ample supply of spare parts should be on hand and ready for immediate use.



3. **TOP PLUG** is put on the first spindle and if it is not concentric, tap the base with a hammer until the adjustment is correct. On some older type bases the nut holding the base must be loosened before adjusting with the hammer. Where a cup-shaped washer is used, the nut need not be loosened. The procedure is continued until all spindles have been set at the top. (*Continued on opposite page; begins with upper left photo.*)

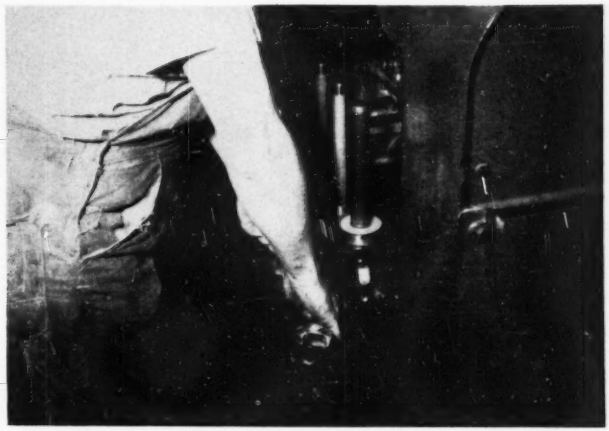
Polishing Rings

WHILE the overhauler is plumbing the spindles, the helper can spend his time polishing the rings removed from the frames. This is a relatively simple job, but it requires a good tumbler and a polishing mixture as listed in Step 1 on page 94.

1. **REMOVE RINGS** from holders, using a small screwdriver to get the ring loose.

2. **BAD TRAVELER CLEANERS** are removed from holders with hammer and small punch.

4. **BAD SPINDLES** or bolsters usually show up while making adjustment at the tip. Replace as required.



5. **BOTTOM PLUG** is put on first spindle after ring hail has been run to the bottom. If plug is not concentric, loosen nut and pack base. Continue until all spindles have been adjusted at bottom.

Plumbing Spindles Only

SPINDLES may be found out of plumb at times when there is no need to turn the rings. In that event, it is first necessary to go through Steps 3, 4, 6, and 8 as illustrated on page 95. It is particularly important that the overhauler do a good job on Step 8, leveling and seating the ring rail, before trying to plumb the spindles. The duplication of preparatory steps indicates the advantage of doing ring turning and plumbing at the same time.

6. **RECHECK TOP** alignment packing, and mark these for recheck at bottom. If several consecutive spindles are out of line, look for bent lifter rod.

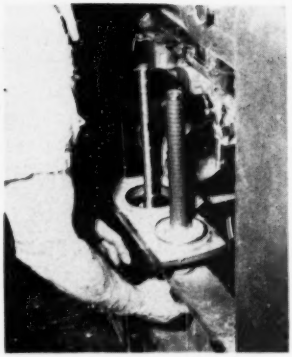
7. **RECHECK MARKED SPINDLES** by winding ring rail to bottom again and bringing them into line. Plumbing is now complete. See page 98 for starting up.

3. **RINGS** are placed in the tumbler with the polishing material. The tumbler is a heavy wood box mounted on a shaft driven by an electric motor. As the box turns, the rings tumble with the polishing material which gives them a good shine. The box turns at 18 rpm, and a set of rings is left in it for four hours. The time and speed may be adjusted to suit the needs of any mill. After they are polished, rings are removed from the box and returned to holders. When rings are in place, avoid bending pins.

(Please turn page)

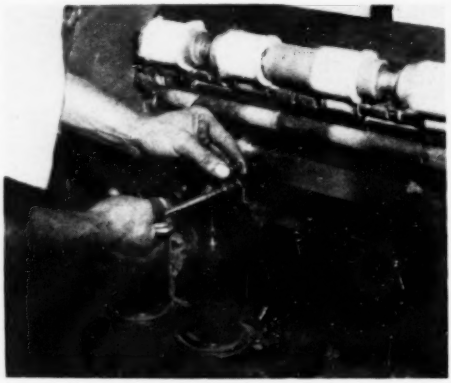
Plumbing "New Era" Spindles

1. **EQUIPMENT NEEDED.** For one man plumbing the spindles, the following equipment is needed: 1 special plumbing disc or plug; one $1\frac{1}{8}$ in. open end wrench; 1 special torque wrench. Although the manufacturer states that these spindles may be plumbed while in operation, it is better to have spindles idle. Replacement spindles are the only supplies needed.

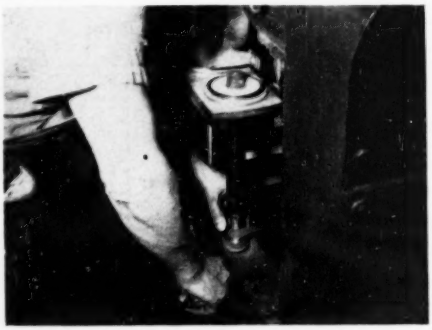


2. **PLACE PLUMBING DISC** over tube against whorl so that distance from top of rail to upper face of disc is $3\frac{1}{4}$ in. Loosen inner sleeve nut and move spindle shaft until ring and disc are concentric; then tighten nut.

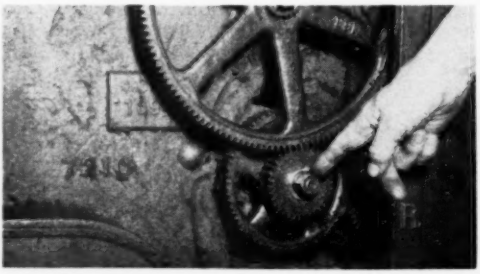
Starting Up



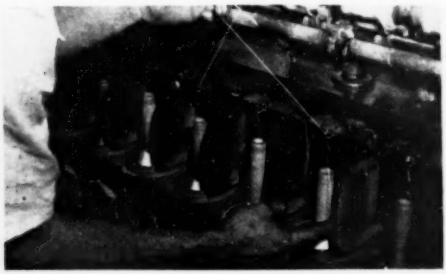
1. **GUIDES SHOULD BE ADJUSTED** with guide set after spindles have been plumbed.



3. **PLACE PLUMBING DISC** on top of spindle with top on ring rail in line with plumbing disc. Loosen shaft nut and move shaft to set disc in center of ring. Tighten shaft nut with torque wrench set at 150 lb. This completes plumbing job when spindles are set.



2. **TWIST GEAR** should be engaged, and travelers put on rings.



3. **BOBBINS** are placed on spindles, frame is started, and ends are put up.

ONE FEED TABLE of a tandem set of Proctor & Schwartz openers in Alexander Smith's opening room is shown in the photo at the left above. Note placard at right of operator illustrating right and wrong ways of blending. In photo at right is the high capacity Rocar opening unit also installed in this department.

Wool Blending

begins at the opening room

Staff Prepared

VARIATIONS in yarn color or texture are more readily apparent in pile floor coverings than in most other textiles, and variations are more likely to occur. Why? A mix for carpet yarns may be composed of as many as 10 or 15 different wool types, in addition to a percentage of synthetics. Each fiber has a different dye affinity, and the dye affinity of a single wool fiber along its length may vary. Tests also show that spinning characteristics differ from wool type to wool type.

For perfect spinning and dyeing, either stock or skein, nothing less than perfect homogenization of all the fibers in the blend can be tolerated. Perfection begins in the opening room where the first blending to obtain uniform distribution of fibers throughout the final spun yarn is started.

In the opening room of Alexander Smith, Inc., in Yonkers, N. Y., Proctor and Schwartz opener units are set up in tandem. Each pair of openers delivers 2500 to 3000 pounds of processed stock to two ceiling condensers that dust, combine, and feed the fibers to a scouring train on the floor below.

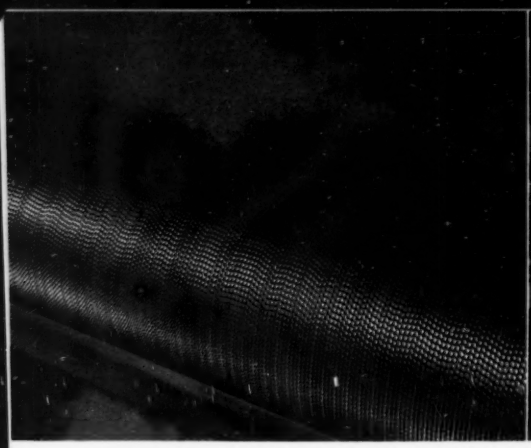
A high capacity Proctor-Leonard Rocar opener is also installed in this department. The opener feeds a large 60-inch four-bowl scouring train. The Rocar occupies only half the floor space of the tandem openers and economizes on labor.

These units can't perform miracles, although they are efficient openers and blenders. Much depends on the operator. Without proper feeding, there can be no proper blending. A sandwich formation of the various components of the blend is the recommended way of loading the feed apron. All the wool specified for the round must be used and in the right proportion. Fleece must be opened. Most important, wool must not be fed in large lumps.

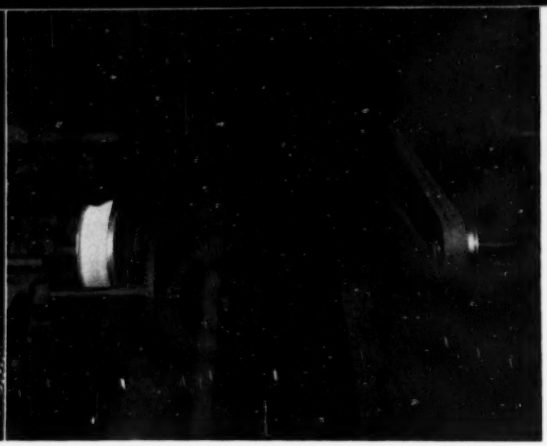
TWO CONDENSERS combine processed stock from tandem openers and chute fibers to scouring range on floor below.

Alexander Smith insures against faulty blending by seeing to it that the operators are fully cognizant of the "right way." A placard showing the correct and only authorized feeding technique is mounted above the feed table on each opener in full view of the operator.

(*Continued on page* 231)



LICKER-IN wound with 5-point wire, 8 threads per in., is operated at 795 rpm.



SMALL LICKER-IN PULLEY (right) operates at 795 rpm; large pulley (left) operates at 517 rpm.

High Licker-in Speed Permits

By E. A. BENTLEY
Superintendent
Swift Manufacturing Co.

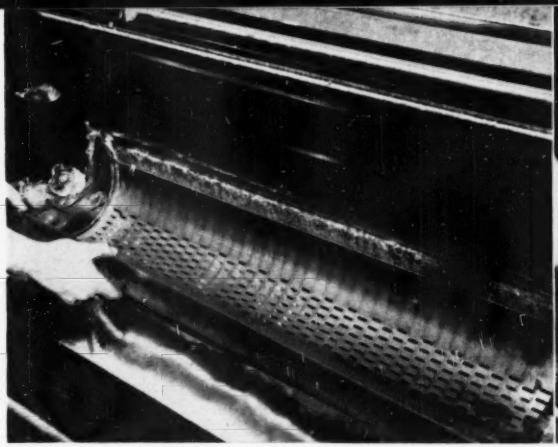
HIGH production on cards is possible through increased licker-in speed. Results have been checked (since June 1951) on cards employing licker-in speeds ranging from 685 rpm to 795 rpm, and the work has shown better breaking strength and less sliver variation. The number of neps per grain was also reduced noticeably.

9,000,000 lb of cotton have been processed through the test cards to the present date. Card production may be increased as much as 40% without any increase in neps. If the low production rate is maintained but at a higher licker-in speed, the neps may be reduced by as much as 10 to 12%.

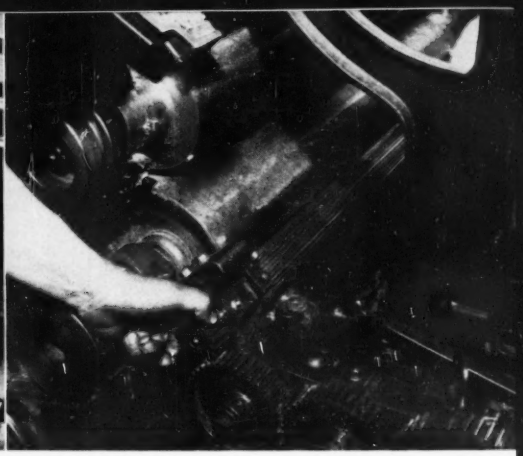
On an overall basis, an increase of 275 rpm in licker-in speed and altered card settings produced carded stock, drawing sliver, and yarn with less variation, an increase of 4.5 pounds in breaking strength, and a decrease of 3.6 neps per grain. Overall variation in yarn on 10s low grade was 109.6% at 517 rpm licker-in speed, and 105.5% at 795 rpm licker-in speed.

SHIRLEY ANALYZER used to test waste from the cards showed a reduction of 3% in lint, an increase of 14% in trash, and cage loss was reduced 10½%.

DOFFER COMBS operate satisfactorily at lower machine speeds, but at higher speeds no surface irregularities may be permitted. Combs may be fixed by milling and grinding the fingers before riveting the blade to the comb.



SETTINGS of mote knives and licker-in screen become more critical. For high licker-in speed new settings are closer.



FEED ROLL must be correctly weighted. Correct bearing clearances must be maintained.

40% Increase in Card Production

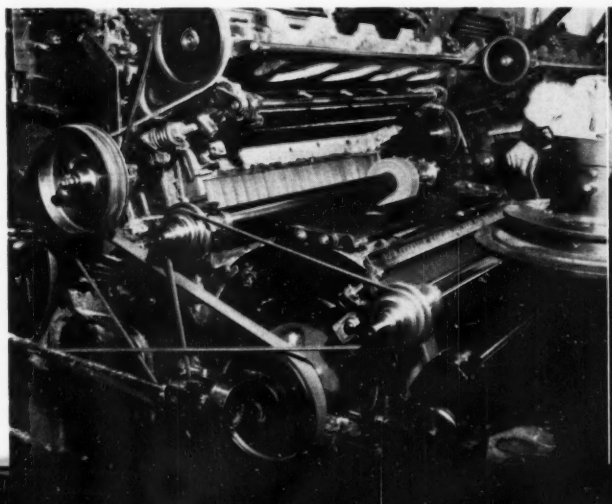
With licker-in speeds increased from 517 to 795 rpm, no disadvantages have been noted in processing 9,000,000 lb of cotton.

The table [on page 103] shows the results before and after the changes were made. Changes made on the cards are also shown [on page 102]. The following account traces the development of the project in the mill from its inception to the present and gives the results in chronological order:

Initial Work. First work was done on six test cards; three H & B; three Saco-Lowell. Licker-in speeds were set at 685 rpm, 735 rpm, and 795 rpm. Normal licker-in speed on the cards was 517 rpm. The preliminary tests were run at carding rates of 15.8, 18.5, and 24.7 lb per hour.

The six test cards were checked carefully during six months of operation, and no disadvantages were

COMB BOX SPEED had to be increased from 1360 to 1750 rpm. Plain bearing comb box must be in excellent condition to stand the increased speed. Better grinding and more accurate card settings are imperative.



CALENDER ROLLS and coiler heads run much faster, making piecing of ends more difficult. Special training for card tenders was necessary.

noted. One entire card room was changed to the higher licker-in speed; 56 of these cards were Saco-Lowell, and 42 were H & B. All of the test cards were in normal mechanical condition as compared to the remainder of the mill. Production rate on the test cards was set at 25.7 lb per hour. Normal production was 15.7 lb per hour. Licker-in speed was established at 795 rpm as compared to 517 rpm normal.

Problems. Speed of the comb box had to be increased from 1360 rpm to 1750 rpm. A plain bearing comb box must be in excellent mechanical condition to stand the increased speed without throwing a lot of oil and doing some damage to both the card and to the fibers. The correct solution to this problem is to install ball bearing comb boxes, which is being done at the present time. However, the entire changeover could not be made at once so the problem was overcome by overhauling the plain bearing comb boxes.

The second problem was presented by the comb which was found to have an irregular surface from one end of the doffer to the other. At lower machine speeds the doffer combs operated satisfactorily, but at higher speeds trouble was evident because the fibers either lapped over the doffer or over the comb, or ran past the comb and caused damage to both the doffer and the cylinder. If the comb is set too close, the card clothing will be faced. The doffer combs were fixed by milling and then grinding the fingers of the comb before riveting the blade to the comb. Some variation is still evident, but has been minimized since the combs were fixed.

To prevent plucking, the feed roll must be of uniform dimensions and correctly weighted.

The calender rolls and coiler heads run much faster than formerly, and it is difficult for the operators to piece the ends at the higher doffer speed. The problem was solved by instituting a special training program for the card tenders to keep the waste to a minimum.

As progress was made it became obvious that better grinding and more accurate card settings were imperative. Each card had to be set to the exact specifications and small tolerances. Quite a bit of grinding and work was done before all of the cards were adjusted properly. Among the more critical points were the mote knives and licker-in screen, which assumed more importance in the control of quality.

Cost. Accurate records have been kept on the cost of operating the cards at the higher speed, and also periodic inspections of the clothing, flats, and other parts have been noted. There has been no apparent deterioration in either the cylinder or doffer fillets, nor in the flats as compared to other cards in the mill. The cost of supplies for the test group of cards is comparable to that on the other cards.

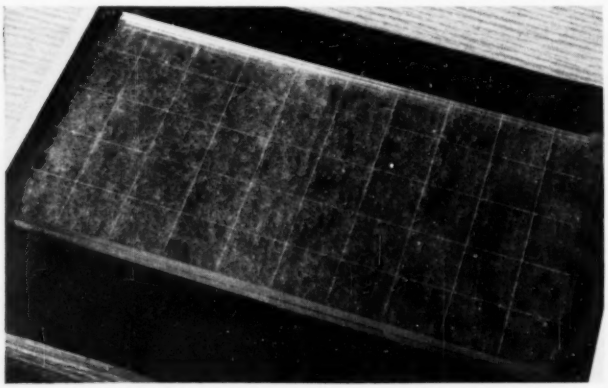
Actually, since the rate of carding is 60% higher, the cost per pound carded is much less than formerly. The comparison may be reconciled in that the sheet of fibers is laid more evenly across the face of the fillet during a single revolution than it has been done in the past. Formerly larger portions

Card Settings, Speeds, and Data

Before and After Changing Licker-in Speed

	Licker-in speed @ 517 rpm Old Setting	Licker-in speed @ 795 rpm New Setting
lb per hr	15.71	25.54
doffer comb speed	1360 rpm	1750 rpm
lap weight per yd	17 oz	17 oz
sliver weight per yd	60 grains	60 grains
doffer to cylinder	7	7
flats to cylinder	10	10
feed plate to licker-in	17	12
top mote knife to licker-in	15	12
bottom mote knife to licker-in	12	10
front plate to cylinder	34	22
back plate to cylinder top	34	34
back plate to cylinder bottom	29	29
doffer comb to doffer	22	12
flat comb to flats	34	34
licker-in to cylinder	7	7
cylinder screen to cylinder front	74	68
	34	34
	34	34
cylinder screen to cylinder back	29	29
licker-in screen to cylinder	22	17
licker-in screen to licker-in	25	17

RANDOM SAMPLE of card web under glass marked off in 50 one-inch squares. Only about 12 neps were contained in the sample.



Results of Increased Licker-in Speed on Cards

On part waste mix containing strips and SGO 1″; LM 1″; and SLM 15/16″ cotton. Making 17 oz per yd lap; 60 grain sliver; 70 hk roving; single 10s yarn. Licker-in speed changed from 517 rpm to 795 rpm.

		Old	New
(1)	Carding rate	15.7 lb per hr	25.7 lb per hr
(2)	Card sliver variation	13.7%	13.2%
(3)	Drawing sliver variation	20%	17%
(4)	Roving variation	42%	39.4%
(5)	Breaking strength 120 yd skein	169.5 lb	173.9 lb
(6)	Neps per grain	33	29.7
(7)	Overall yarn variation	109.6%	105.5%

On LM and SLM 15/16″ cotton spun into 18s yarn (settings identical to those used on lower grade stock).

		Old	New
(1)	Card rate	11.7 lb per hr	15.7 lb per hr
(2)	Card sliver variation	13.1%	11.6%
(3)	Breaker drawing variation	19.08%	17.95%
(4)	Finished drawing variation	22.2%	20.06%
(5)	Breaking strength 18s yarn	103 lb	105 lb
(6)	Neps per grain	18.7	14.6

of fibers were delivered, and instead of being transferred were jerked from the licker-in by the cylinder.

Tests were made on a part waste mix containing strips and Strict Good Ordinary 1″ cotton; Low Middling 1″; and Strict Low Middling 15/16″ stock. The licker-in in every instance was wound with a five-point wire on eight threads per inch, or 40 points per square inch of licker-in surface. The face of the licker-in wire was ground to a 10-degree angle. (See table for other details.) Note in the accompanying table that the comb setting is close. The close setting was necessary to keep the web combed off the doffer at an even rate without accumulating tags.

It is desirable to set the bottom of the licker-in screen close to the licker-in. The closer setting diminished the amount of fly taken out from underneath the card and also produced a better web at the front. The stock from the cards was run through two-process drawing (ball bearing rolls), single process 70 hk roving, then spun into 10s yarn.

Laboratory records show that card sliver variation at 15.7 lb per hour and normal licker-in speed was 13.7% for the low grade mix. On the higher licker-in speed at 25.5 lb per hour, the sliver variation was 13.2%.

Drawing sliver variation at normal licker-in speed was 20%; whereas it was three points less, or 17% at the higher licker-in speed.

Roving showed a variation of 42% at normal speed and 39.4% on the high speed cards.

Breaking strength for the 10s yarn averaged 169.5 lb per 120 yard skein on normal yarn as compared to 173.9 lb for the high speed licker-in carded stock.

On the low grade stock, the neps per grain were determined by taking three counts of 150 square inches of card web, one count from each side, and one count from the center of the web. The average nep count was found to be 33 on normal production and 29.7 on the high production work.

On Better Grade Stock. Production experiments have been undertaken on other grades of cotton; although not as extensively as on the lower grade stock. Low Middling and Strict Low Middling 15/16″ cottons have been used. The settings in each instance were identical to those used on the lower grade stock, and the licker-in speed was maintained at 795 rpm as compared to 517 rpm normal. The carding rate was increased from 11.7 to 15.7 lb.

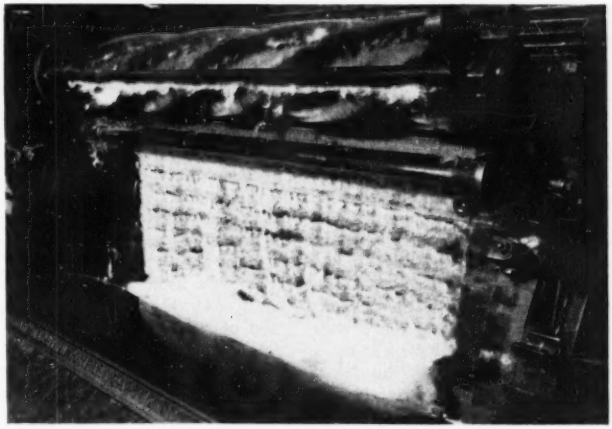
A comparison of the results (see table of data) obtained after the increase in speed is as follows: The overall variation of the card sliver was 13.1% for the higher licker-in speed. Finished drawing variation was 22.2% as compared to 20.06% on the high production stock. Breaking strength for 18s yarn was 103 lb for normal speed and 105 lb for the high licker-in speed.

Neps per grain (test procedure same as on 10s yarn stock) for the low licker-in speed was 18.7 and 14.6 for the high licker-in speed.

Tests have not been completed

(*Continued on page* 231)

MARKED REDUCTION was noted percentage-wise in flat strips on cards operating at high licker-in speed. Amount of strips remained constant despite increased production.



AT THE "LINTHEAD CIRCUS PARTY" on Thursday evening, prizes were awarded for the best circus performers' and spectators' costumes which were, of course, made of cotton. Joe L. Jennings of West Point Mfg. Co. and newly elected president of the Alabama Cotton Manufacturers Association, is the "strong man" (lower center).

Ray of Hope: Cautious Optimism Sounded at

Alabama Textile Convention

Staff Report

THE TEXTILE industry was given a ray of hope for better business by Robert C. Jackson of ACMI when he spoke before the annual meeting of the Alabama Cotton Manufacturers Association in Biloxi, Miss., on April 4.

Citing statistics to show that the economic facts are now in the textile industry's favor, he sounded a note of cautious optimism, but he was quick also to point out that the business cycles of the industry are most irregular and are characterized by violent swings up or down—warning that "the surest way not to come down so hard is not to swing up so high."

The rate of physical activity showed that the depression the industry has had was unique in that it consisted almost entirely of unfavorable price and marketing factors; production and employment at that time were about normal or at least on the same level as the pre-Korean base, he said, and that was the first time in textile history such has occurred.

Mr. Jackson emphasized that most observers agreed the liquidation of surplus inventories at the retail level has probably been completed, which, if true, is one of the most important conditions to recovery in the primary markets.

D. H. Morris, III, president of the association and of Geneva Cotton Mills, said it appears that one of the uncertainties facing the industry is "how much money are we going to give away before we begin to exercise sound reasoning and good judgment in the operation of our mills and the distribution of our products."

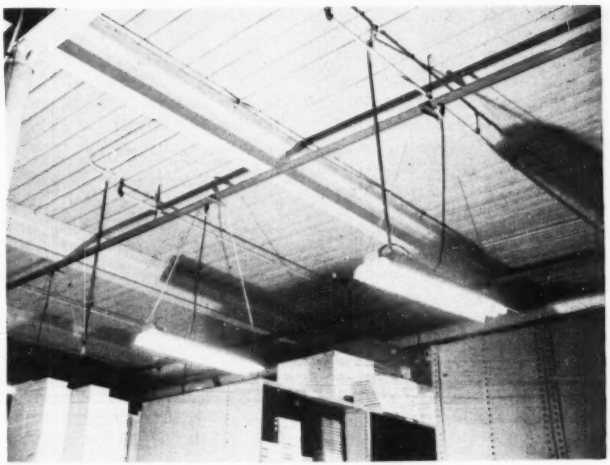
Speaking on the tax rate, he thought that the bulk of the load would have to be carried by the wage earners and salaried workers and business men in other industries because if the textile business continues in its present state, "and if your profit and loss statement looks like ours, the government is

Movable Light Fixtures Useful

in full-fashioned hosiery mills

Staff Prepared

Light fixtures which can be moved to any position along a central bus-bar extending along a ceiling bracket are now in use in several mills; however, they have proved of especial value in full-fashioned hosiery mill applications. The light fixtures hang from the overhead bar and are fully movable to any position along the bar. This feature is of value in any instance where departments are rearranged occasionally or where machinery is changed from one location to another to accommodate current production requirements. The equipment shown in the illustration is called Flex-A-Power lighting and was supplied by Trumbull Electric Manufacturing Co



CENTRAL BUS-BAR on ceiling supports fluorescent fixtures which may be moved to any position along the bar.

going to get very little income taxes from the textile industry in 1952."

Mr. Morris described a number of activities of the Alabama association and some of the present problems, which if to be solved will require "us as manufacturers and leaders in our communities to exercise good judgment and cooperate with each other and to operate our plants with sound business practices based on honesty and integrity and hard work."

Officers Elected. Joe L. Jennings of West Point Manufacturing Company was elected president of the association, succeeding Mr. Morris who was elevated to chairman of the board. Other officers are Dwight M. Wilhelm, Montgomery, Alabama, executive vice-president; T. P. Roberts, Adelaide Mills, Anniston, Ala., vice-president; and A. D. (Jack) Elliott, Huntsville (Ala.) Manufacturing Company treasurer.

"Dacron" Sewing Thread for All Fabrics

Sewing thread of "Dacron" polyester fiber is reported to have been found excellent for fabrics containing new synthetic fibers like "Orlon" acrylic fiber and "Dacron," as well as for cotton, silk, wool, rayon or nylon. The new thread stitches sheers more exquisitely than any other, according to tests by the manufacturer.

Developed and distributed by The Spool Cotton Company, it is offered in size "A" under the brand names of J. & P. Coats and Clark's O. N. T.

For machine stitching, "Dacron" thread is as simple to use as mercerized thread, it is claimed. Preliminary tests by the manufacturer show that switching from cotton of equivalent size requires no change of tension, needle, or stitch. For hand-sewing, the new thread is smooth to work with and does not snarl. It is easily threaded into the needle, as it cuts clean without fuzziness.

Since "Dacron" softens at high temperatures, it is advisable to follow the ironing instructions issued by the manufacturer of this thread.

Made of continuous filament "Dacron" in 75-denier yarn of three-ply construction, the thread is said to be remarkably strong, smooth, pliable, shrink-resistant, and to have a subdued luster.

Many are the applications for

Pressure-Sensitive Tapes in

By **NORMAN P. HICKOK**
Chemist, Industrial Tape Corp.
New Brunswick, N. J.

IMAGINATIVE use of tape has been saving time and materials in the textile industry. Despite the fact that textile engineers in the past two years have been learning more and more about the varied uses of pressure-sensitive tapes, their possibilities so far have been barely explored.

Recently a textile engineer sought to improve his plant's method of winding processed cloth onto a new cloth roll. For years, when a finishing plant wanted to change from a full roll to a new shell, the operators wet the end of the cloth and wrapped the wet material around the shell. This provided the friction necessary to start the cloth on the new shell, but it caused several yards of cloth to be spoiled or stained.

User-Maker Cooperation. The engineer then thought of using pressure-sensitive tape. Tape manufacturers came to his help with a tape that had adhesive on both sides. The tape proved satisfactory, and after the method was initially proved, a piece of pressure-sensitive tape with adhesive coating on only one side was used. This was placed on the shell with the adhesive side out. Thus, it was possible to reduce the cost of the tape used and, at the same time, save the mill money by reducing waste.

Tape manufacturers invariably cooperate in the development of tape for specific purposes. The splicing of narrow fabrics, for instance, requires a tape that applies readily and holds tight through processing, which may include wetting and application of heat. Recently, the tape industry developed a thermo-setting adhesive tape which can be pre-cured on the splices to provide the desired characteristics. This tape has important implications for the industry.

Although the use of tapes has developed to the point where millions of dollars worth are used annually, very few persons possess accurate information on how to use the tapes most effectively.

Pressure-sensitive tapes are actually self-sealing tapes that stick to dry surfaces with a touch, or by the application of pressure, without having to be moistened.

Special Tapes. There are more than 30 different kinds of tape, many designed for a specific purpose. Basically, the differences are in the degree of adhesion and the various types of backing. Tapes can be obtained with backings of cellophane, plastic, laminated construction, cloth, paper, and even some metal foils.

The various paper tapes are most generally used in the textile industry. These include both flat paper and crepe paper tapes, which have been developed with non-staining adhesives to avoid staining or discoloring fine cloth or yarn. Another paper tape of general use is double-faced tape with adhesive on both sides. This particular type avoids the mess found in some adhesive applications.

Textile Usage. Tapes are used frequently in the textile industry for holding, identifying, labeling, protecting, and sealing.

Some applications for tapes are as follows:

(1) Holding warp ends in parallel on warping operations and at the slasher.

(2) Sealing the last lap on rolls of cloth.

(3) Identifying (by using different colored tapes) different grades of stock in sliver cans.

(4) Binding the center of scavenger rolls.

(5) Protecting the race plates on high speed looms.

(6) Sealing outer-wraps on rolls of yarn or cloth.

(7) Sealing finished goods.

(8) Splicing narrow fabrics.

(9) Starting rolls of cloth on shells or cloth winders.

(10) Labeling yarn.

(11) Indentification of defects in cloth.

(12) General plant maintenance: masking in plant painting and insulating in electrical installations.

(13) Forming a guide on drying cans.

(14) Splicing or roving on Pin Drafter machines.

(15) Sealing paper liners in sliver cans to protect against dirt and dust for handling in the plant.

(16) Use of cellophane backed tape, either transparent or in colors, for packaging or identifying purposes.

A little-known application of tape is the use of printed and colored tape in labeling the many types of rayon and synthetic yarns. Another application is the use of tape for identifying defects in cloth.

Selection of Tape. There is no established formula for selecting a tape; each choice must be made on the basis of the particular problem to be solved. Usually the selection should be made with regard to the tape's tensile strength, tear resistance, flexibility, elongation, purity, hardness, strength, and the conditions to which the taped part will be subjected in the future.

In selecting a tape to do a job, it is necessary to consider the mechanical abuses and abrasions a tape may be forced to withstand. Paper tapes are relatively poor in this respect. Flatback tapes have little stretch, and cloth tapes, because of their ability to stretch under strain, may actually do some

Textiles

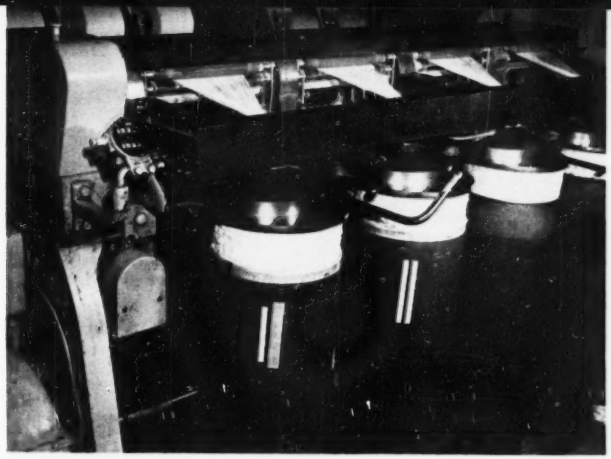
jobs better. Crepes can withstand considerable punishment.

In selecting the size of a tape for a job, do not be misled into thinking that narrow width tape is less expensive than wider widths. Most tape manufacturers charge a premium for narrow width tape. A half-inch width actually costs more than one half the cost of the one-inch width. A quarter-inch width actually costs close to half the price of a one-inch width, because of the high waste that occurs in the slitting process. One commercial dispenser has a slitter for cutting narrow widths from one-inch tape, thereby permitting some economy.

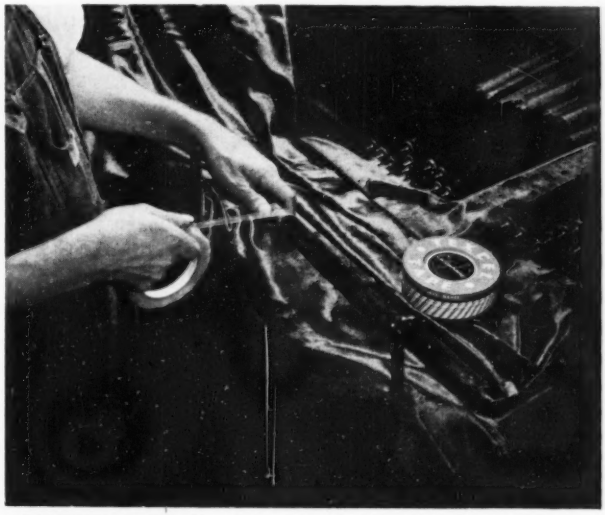
For heavy work, wide widths, save time and do a better job in the long run. The amount of tape wasted in spiraling narrow width in order to cover a wide area is quite astounding—especially if the practice is carried out day after day. In time of increasing shortages, conserve your tape and employ it for useful purposes.

In considering "holding power" vs. "stickiness," a tape may feel tacky but have little ability to hold two objects together. For example, a tape made by coating chewing gum on paper would be sticky, but it would have no cohesive strength and would not hold a coil together. Another tape may not feel particularly sticky, yet do an excellent job of holding. A good tape should have both qualities—excellent holding powers and tackiness or "quick stick."

The actual holding power of a tape depends upon the area of adhesive surface in contact with the material to be held. Manufacturers try to develop sizings on the back of their tapes (paper or films) which permit easy release of adhesive during the unrolling process. It is not wise to use tape applied to its own backing for holding. It is better to use a wider tape

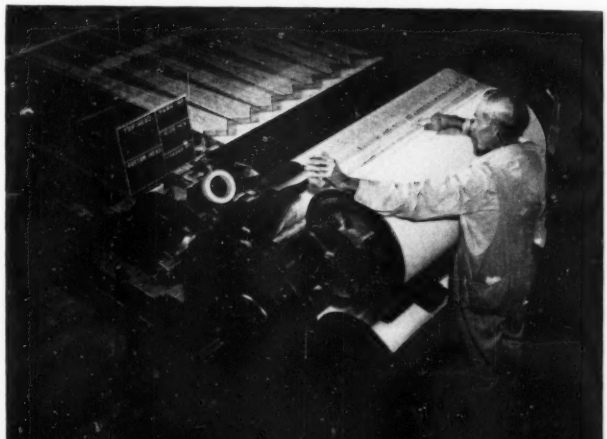


TO IDENTIFY STOCK. Identification marks may be put on sliver cans by using bands or strips of different color cellophane tape.

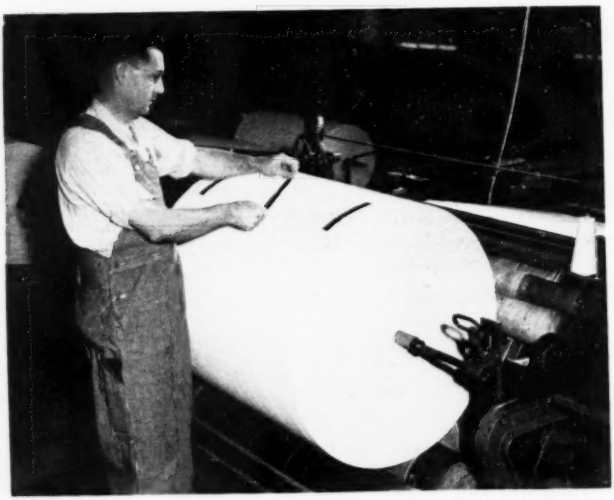


TO SPEED A JOB. Coverings are secured on scavenger rolls by using double faced tape, and a band of cellophane tape prevents unraveling.

TO REDUCE WASTE. Tape applied to warp ends holds threads in position upon removing full beams from the slasher.

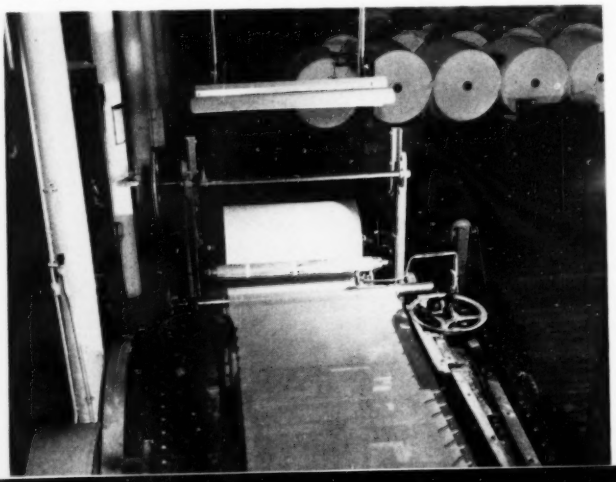


TO SIMPLIFY A JOB. Double faced tape is used quickly and effectively to secure opossum fur inside shuttles.



ROLLS OF CLOTH. Pressure sensitive tape is applied to hold the last wrap in place on a finished roll of cloth.

AT THE TENTER. Tape holds last lap of cloth in place on rolls ready to leave the tentering machine.



and use less overlaps in the taping operation.

If high tear strength is needed, it is better to use one or two turns of a cloth tape than many turns of a paper tape. When wide width of paper tape is to be used, try crepe backed tapes in place of flat backs if space permits. Crepes have the ability to conform to irregular surfaces, thereby doing a neater job.

Care and Storage. The care and storage of tape is a simple matter, although considerable quantities are lost every year through careless handling. No operator would think of throwing a sharp knife into a box with other tools; however operators frequently toss a roll of tape into a box, deforming it, and possibly rendering it useless.

It is a good rule, therefore, never to dump tape into a corner or onto a table, so that the rolls pile up on each other. Where possible, tape should be drawn from a dispenser. If this is not feasible, a small wood rack should be used to protect tape when not in use.

Tape should be at room temperature when it is used. If it has been stored in a cold room, bring the tape inside the shop to stand for awhile before use. Low temperatures render tape extremely difficult to unroll. This is because the adhesion to the backing is high—which results in breaks during unwinding and difficulty in handling. The roll can be heated to about 100-125 F for awhile to increase its adhesive qualities, but heat reduces holding qualities of the adhesive. However, good adhesive qualities will be restored when the tape cools to room temperature.

Hot and damp storage places should be avoided. Tapes are usually made with uncured rubber and resins. Uncured rubber tends to oxidize and become soft. Though chemicals help prolong the useful life of tape, heat will increase deterioration materially. The same is true of moisture. Six days at approximately 150 F and 60% relative humidity is equivalent to six months storage at 70 F and 50% relative humidity. The best place to store tape is in a clean, cool room.

Check discharge printing with a

Mill - Made Ultra - Violet Viewer

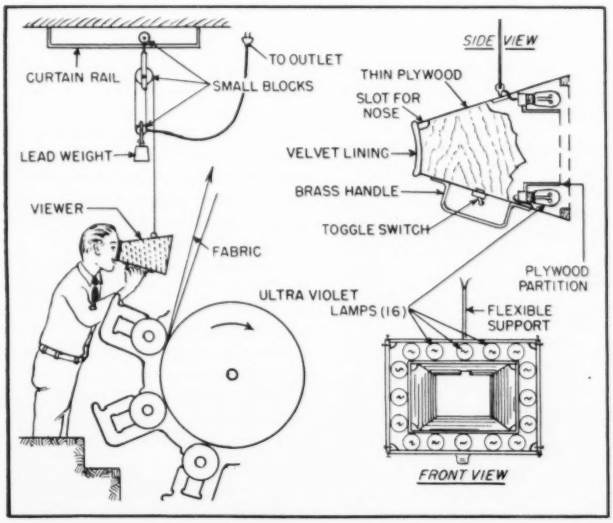
READERS are invited to submit kinks, short-cuts, time-savers, or quality improvement ideas, such as the one published here, in a TI KINK CONTEST. See the announcement on page 149 for details of the contest currently under way. A few minutes spent in preparing the information may win for you $100 plus space rates.

EDITOR TEXTILE INDUSTRIES:

One of the most exacting duties of the printer is the production of white and colored discharges on rayon crepe and other similar fabrics. Black discharged with light colored vat colors presents a special problem in that it is very difficult to keep continuous check for proper register. The discharges do not show up well on the dark background.

Small detail in discharge work is almost impossible to check. It is especially difficult to detect the occurrence of doctor streaks, "snips" caused by grit in the paste becoming embedded into the roller surfaces, and "coating" of rollers with paste resulting from physio-chemical changes in the discharge color during running. As a result of such difficulties many yards of fabric are run through the machine before the trouble is discovered and remedied. Often, the defect shows up after steaming. Print rooms relying on artificial light and night work usually produce more spoiled goods than others.

The device shown in the accompanying illustrations consists of a cone-shaped plywood box, open at both ends. The small end is shaped to fit the face of an observer. On the large end 16 small Argon vapor lamps are arranged in a framework shielding the observer from direct rays. The lamps, which are easily obtainable at a few cents cost, fit standard lamp sockets and emit very little visible light, but are rich in ultraviolet radiation.



To use the device effectively, a small quantity of a fluorescent white dye (e.g. Tinopal - Geigy) is added to the print paste. This particular dye is compatible with almost all vat colors printed by the potash-Rongalite method and is fast to discharging in many instances. About one-half to two parts per thousand of print color is adequate.

The intense fluorescence of the discharge color is visible without effort by the printer looking through the ultraviolet viewer, and the forementioned faults are at once apparent and can be remedied before more than a few yards of waste or "seconds" are made. Further, the incorporation of fluorescent white dye into the print color which withstands sulphoxylate, steaming, and oxidation adds to the brilliance of the resultant discharge prints.

For convenience, the device is suspended from its own electric cord (vinyl cord is suitable) from a short rail (aluminum H-section curtain rail). The pulley arrangement consists of wooden pulleys and blocks, as used for domestic laundry lines, and a suitable lead weight to counterbalance the viewer. The instrument may be lowered by the printer to view the fabric between the lower print rollers, and thus locate the seat of the trouble rapidly.

The device becomes even more effective if the usual illumination is briefly switched off.

CONTRIBUTOR No. 8445

Viscosity Measurements

(their value to cotton)

THIS test aids the manufacturer by disclosing fiber damage caused by weather, sunlight, bleaching, mercerization, dyeing, mildew, heat, smoke, etc. Fabric merchandisers use it to discover latent damage which otherwise would not be detected for weeks or months.

JULIA H. CROW and CARL M. CONRAD
*Southern Regional Research Laboratory**
New Orleans, La.

DURING RECENT years the cotton industry, particularly cotton finishers and trouble-shooting laboratories of large merchandising firms and laundries, have begun to apply, to an increasing extent, certain laboratory tests that are more or less standard procedures for manufacturers of rayon and other synthetic textiles and for the pulp industries.

Viscosity Shows Extent of Damage. These tests, known technically as measurements of the viscosity (or fluidity) of cellulose, tell as much or more about the quality of a piece of cotton cloth, or of the cotton fiber itself, than do many of the tests in more general use. They reveal the precise extent to which the fiber may have been damaged by weather or sunlight, or the fabric by bleaching, mercerization, dyeing, or other finishing methods. In some instances they probe beyond the immediate deterioration to foretell latent damage not readily discernible by other means.

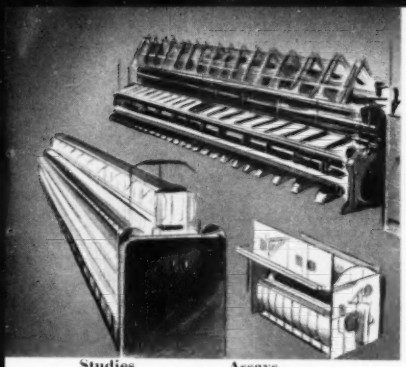
A viscosity measurement is pretty much what the name implies—an indication of the sluggishness or fluidity of a liquid, which is most readily evidenced by the rate at which the fluid flows under carefully controlled conditions.

Procedure. As cellulose itself is not a fluid, it must be dissolved in a liquid for the test. Only a very few special liquids will dissolve native cellulose. Those which are suitable for the purpose are quite alkaline, aqueous mixtures. Sometimes, depending on the type of damage under study, it is desirable first to treat the cellulose with nitric acid, which changes it into a type of "gun cotton" that can be dissolved in a much greater number of organic liquids.

The solution then is forced, or allowed to flow under its own weight, through tiny glass capillary tubes in a viscometer, to determine its rate of flow. A slow rate, when the solution is thick and sirupy, indicates very high quality cellulose, or a high degree of polymerization—"D.P." as the chemist calls it. A fast rate, where the solution is quite thin and limpid, indicates cellulose with a low degree of polymerization.

Chemists look upon cotton as composed principally of long chains of cellulose molecules—thus constituting what is known as a high polymer, made up at its best of something like 5,000 exactly similar units linked together in a long chain like a chain of beads. The chains are assembled roughly

*A unit of the Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Department of Agriculture.



Studies Assays

parallel to one another, and each chain may pass through a considerable number of alternating crystalline and non-crystalline regions.

Many things—acids, alkalis, heat, mildew, light, smoke, and a host of others—can damage the cellulose, particularly in the non-crystalline or amorphous areas. This causes the chains to break with separation of some of the units and a corresponding reduction in the degree of polymerization. Thus, when a chemist says the viscosity measurement shows that the cellulose in cotton or a cotton fabric has a high "D. P." he means the fiber or fabric is practically undamaged, and when he says the test shows a low "D. P." he means there is considerable damage.

Useful in Finishing Plant. Since any damage to the length of the chains in cotton affects its usefulness, the viscosity measurement has numerous possibilities as a diagnostic aid in identifying and correcting troublesome situations throughout the processing industry and in developing new treatments. Its advantages are most obvious, perhaps, in the finishing plant—to check the action of the various chemicals used in bleaching, kiering, mercerization, dyeing, treatments for crease resistance, and the like.

Nevertheless—and this is in direct contrast to the situation with rayon and other man-made textiles, where viscosity measurements are recognized as a necessary control step in various stages of processing—these tests are not yet making their largest contribution to cotton manufacturers through application in the processing plant, or even in commercial testing laboratories. Rather, they are serving the cotton industry most through their usefulness to scientists who are developing the basic information needed to understand the causes and extent of deterioration in cotton cellulose and to develop preventive measures.

Used by Purchaser of Fabric to Determine Quality. The methods also are used by large fabric merchandisers in control laboratories as a check on quality. A great advantage in this use is that latent damage, which would not show in the usual tests for fabric strength until weeks, or perhaps months, later can be detected immediately by a viscosity measurement. Immediate detection of such damage can forestall many complaints from customers about fabrics that appeared in good condition when purchased, but later lost their strength—on washing with soap or soda, for example.

In the past there were many obstacles to the widespread application of viscosity measurements by cotton manufacturers, but some of these have been overcome during recent years. With the practical aspects of these tests now generally recognized, ways are being sought to overcome other difficulties in order to make the techniques of still more value to cotton. The Southern Regional Research Laboratory has conducted studies along this line for several years as part of its overall program to improve the utilization of cotton lint.

Chemicals for Viscosity Tests. A major obstacle, originally, in the use of viscosity measurements by cotton manufacturers was the chemical required to dissolve the cellulose. Until recently, this was almost always cuprammonium hydroxide. However, the ammonia in cuprammonium hydroxide evaporates rapidly, not only giving rise to disagreeable fumes in the process, but soon causing the reagent to lose its power to dissolve cellulose, so that it becomes useless for the viscosity measurement.

The copper it contains is unstable at room temperature, so cuprammonium hydroxide must be kept under refrigeration, which is inconvenient and expensive. Furthermore, cellulose in the presence of cuprammonium hydroxide is very sensitive to the oxygen in the air, so has to be carefully protected from it by means of an inert gas like hydrogen or nitrogen during the test.

These difficulties have been overcome, to a considerable extent, by the use of another solvent for the cellulose. The Southern Laboratory has used cupri-ethylenediamine hydroxide to good advantage. This reagent is much less volatile and more stable than cuprammonium hydroxide. It can be readily prepared by mixing the proper proportions of two chemicals, ethylenediamine and cupric hydroxide, in water.

The cupric hydroxide now can be bought in a relatively pure and stable form, thus eliminating the very tedious step of preparing it. The prepared mixture can be stored under nitrogen at room temperature and will keep until needed. It dissolves the cellulose effectively and results in measurements of viscosity that are equally as valuable as those obtained with cuprammonium hydroxide.

Another problem in the application of viscosity measurements to cotton has been the difficulty in obtaining comparable results on different viscometers. It is practically impossible to make two viscometers with exactly the same diameter of the fine capillary tube; furthermore, under the older methods any variation in the way the same viscometer was used could cause discrepancies in the results.

The Southern Laboratory has established specific conditions for applying the test to cotton, and to cellulose in general, so that the kind or type of viscometer to be used is unimportant. Charts have been drawn which enable an operator to get his results quickly and to translate them into reasonably non-technical language. And while it is still important that viscosity measurements be made under the supervision of a technical

(*Continued on page 121*)

TALLASSEE MILLS
LIGHTING MAINTENANCE

Date_____

Dept _____

No. Fixtures to be Cleaned_____

No. Fixtures Cleaned_____

No. 90 watt Tubes Replaced_____

No. 90 watt Starters Replaced_____

No. 40 watt Tubes Replaced_____

No. 40 watt Starters Replaced_____

Remarks_____

Schedule for Light Cleaners

1st shift	Job to Do
6:00 to 6:15	Fill vat with water and gather washing supplies
6:15 to 7:45	Wash lights
7:45 to 8:00	Unoccupied
8:00 to 9:45	Wash lights
9:45 to 10:05	Unoccupied
10:05 to 11:45	Wash lights
11:45 to 12:00	Unoccupied
12:00 to 1:40	Wash lights
1:40 to 2:00	Push vat to platform, empty water, and put away supplies

Note: Replace any burned out bulbs while washing. Mark up the date, men working, and department worked in on sheet provided for same. When this sheet needs replacing turn in used sheet to Electrical Department.

Replace burned out bulbs every 25 working days. Mark number of bulbs replaced on sheet.

OPERATOR 3 removes dirty tubes and reflector; passes them down to Operator 2

Then while Operator 2 is in transit to vat, Operator 3 picks the accumulated cotton from wires and cleans the part of light fixture not removed, completing this operation by the time Operator 2 returns with clean reflector and tubes; these are passed up to him and he replaces. Both Operator 3 and Operator 2 move scaffolding or ladder and equipment to the next location.

Systematic Cleaning

cuts costs and provides

THE PICTURES on these pages show how our systematic light cleaning program is performed by three men. Using the system we have reduced the cost of cleaning lamps and fixtures to one-third of the former expense; have improved candle power throughout the plant by keeping it at a high level; and have relieved the department heads of a non-productive job.

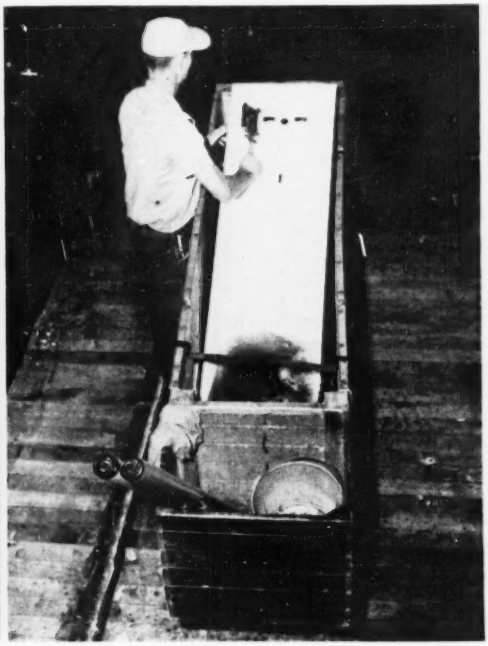
In order to determine the size of the crew, we made time studies of one, two, three, and four operators on the job of cleaning the lights. The lowest unit time for a fixture to be removed, cleaned, and replaced was by the 3-man crew.

From our departmental floor plans and the number of fixtures in the mill, we determined that it would take 51 days to make a complete round of cleaning; and by taking light meter readings with clean lamps and fixtures at night so that daylight would not interfere, we found that we were within the recommended candle power for textile operations on plain white goods. The table [on page 114] shows the candle power reading for the departments after cleaning, such readings being taken in nine different locations in each department. As can be seen, our cleaning cycle could have been anywhere from 50 to 70 days.

OPERATOR 2 receives dirty tubes and reflector from Operator 3. Takes them to vat.

Operator 2 does not wait for fixtures to be cleaned because Operator 1, at the vat, has cleaned extra set of fixtures. Operator 2 returns immediately with clean tubes and fixtures; passes them up to Operator 3. Operator 2 also obtains new tube from vat location if tube is burned out; then helps Operator 3 move equipment to next location.

OPERATOR 1 at vat location washes and dries dirty reflectors and tubes.



Working on extra reflector and tubes, Operator 1 stays ahead of fixtures removed. As equipment is moved, Operator 1 also moves the cleaning vat to the most convenient location. Operator 1 also is custodian of new tubes and extra starters, which are installed when needed. The three operators change jobs every 2 hours and 40 minutes to break monotony.

# of Lamps, Fixtures

high level illumination

This test was performed at 10-day intervals up to 80 days, but we already knew that we would accept nothing less than the recommended candle power for the mill.

Taking into consideration the tube life (7000 hours), 10% to be burned out before replacement (theoretical), the number of lights (5086), and the number of hours a day the lamps burned, we figured 29 days before it would be necessary to make a tube replacement round. Unit time for replacing the burned out tubes and bad starters, including walking time for inspecting, was 1.54 minutes per fixture. Thus we came up with 2.06 working days just to replace bulbs.

The information gathered at this point showed that we needed a 3-man crew, had 5086 lights, required 51 days of work to complete a cleaning cycle, must have a 50 to 70-day frequency of cleaning to maintain our lighting standard, 29 days before a replacement round became necessary, and 2.06 working days on each replacement round.

We then decided to make a replacement round every 25th work-

By VIRGIL REDDEN
Tallassee (Ala.) Mills

Candle Power Reading After Cleaning

Dept.	Recommended Max.	Recommended Min.	0-10 Days	10-20 Days	20-30 Days	30-40 Days	40-50 Days	50-60 Days	60-70 Days	70-80 Days
Carding	13	14	18	17	16	16	15	14	14	13
Spinning	20	16	22	20	18	17	17	16	16	15
Weaving	25-30	20	30	26	24	22	22	20	19	18

Readings taken as near middle of period as possible.

ing day of the light cleaning crew, with the crew working on a 5-day week while the plant operated on a 6-day basis; that gave us a round of replacement every 30 days.

Correlating the factors, we scheduled work as follows: 51 days to make a cleaning round, 4 days for replacement (2 rounds), or a total of 55 working days for one round of cleaning and two rounds of replacing burned out tubes.

As can be seen, the foregoing fell within our pre-determined time for fixture cleaning.

Our light cleaning crew is under the supervision of the electrical department. Each morning the crew is given a form [page 112] showing the number of fixtures to be cleaned and the department in which to work. At the end of the shift the form is filled in by the crew, and then a master sheet is made from it as a permanent record.

Aluminum Foil Utilized in Fire Protective Clothing

A new fabric, developed in Switzerland for use in special-purpose clothing for persons exposed to extreme heat, employs the principle of heat reflection and utilizes aluminum foil as the reflecting medium.

Since brightly polished aluminum foil has a low tensile strength, poor flexing and abrasion resistance, and little elasticity, it was necessary to combine it with yarn or fabric which has the opposite characteristics. After considerable effort by various research organizations, this heat protective fabric known as "Tempex" was produced.

The effectiveness of the new fabric as a fire-resistant textile was demonstrated in tests conducted by the textile section of the EMPA (Swiss Federal Material Testing and Experimental Institute). Samples of Tempex, asbestos, and wool fabrics of weights and thicknesses as follows were prepared:

	Weight	Thickness
Tempex	340 g/m²	0.61 mm.
Asbestos	1246 "	2.65 "
Wool	604 "	2.28 "

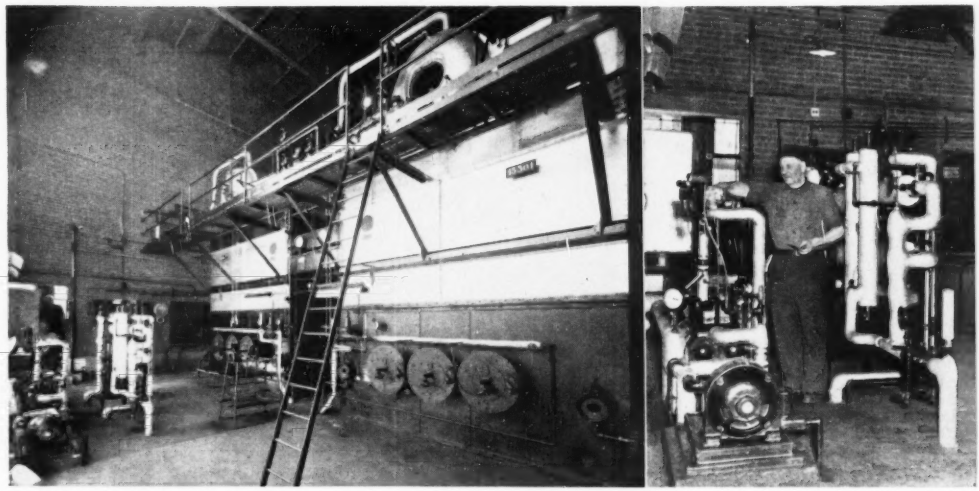
Tests were carried out at a starting temperature of 1000 C which dropped, during the 15 minute tests, by 300 C. The samples were tested for 15 minutes and gave the results shown in the accompanying box.

EMPA stated that the protection afforded by Tempex depends upon the reflective capacity of the aluminum foil lining. With the protective material, back-radiation averaged 92% when the radiation temperatures at 75-, 50-, and 25-cm distances were calculated. The reflective power of the material would be still further increased, it is claimed, if the aluminum foil could be mounted on a completely smooth carrier fabric.

In conclusion EMPA said that Tempex gave superior protection against heat over that afforded by asbestos. It offers sufficient protection against radiation heat in conditions when a woolen fabric would normally be destroyed by self-ignition.

Two practical demonstrations were conducted at St. Gallen and Berne in conjunction with the local fire brigades. Two piles of dry wood about 1 m. apart, 2 m. high and 1 m. in diameter were soaked in petroleum and benzine and then ignited. A temperature of over 1000 C was generated in these huge bonfires. Firemen in Tempex protective suits were able to move unhindered within the immediate vicinity of the fires and were frequently in direct contact with the flames. Wooden boxes, dry wood wool, were covered with the material and despite the intense heat and radiation, the wool did not catch fire.

	Distance from Source of Radiation		
	75 cm	50 cm	25 cm
Tempex	No damage	Slightly browned	Strongly browned
Asbestos	Weak	Strongly browned	Strong grey/brown discoloration
Wool	No visible damage	After 30 min test beginning of heat damage; after 5 minutes more, completely charred.	Test broken off after 30 secs.



STEAM GENERATORS. Two 500 hp Type "CP" Keeler steam generators (left) fired with three mechanical atomizing burners; right, electrical heating and pumping accessories for cold start-ups are easily maintained, have few controls. Units are furnished in duplicate to avoid lost dyehouse production in case of failure.

Oil-Fired Boilers Advantageous

for intermittent tricot finishing operation

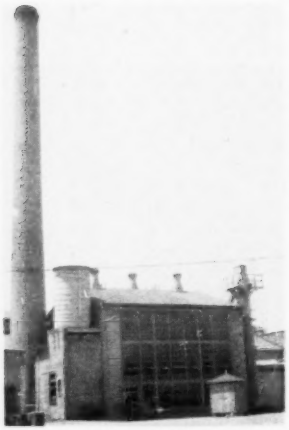
Staff Prepared

WHEN the steam load of a tricot mill varies anywhere from 2,000 to 15,000 pounds per hour because its dyehouse is running intermittently, fuel conservation becomes of paramount concern. The rate of fuel consumption should be adjusted rapidly and proportionately according to the demands for steam. As the Steinfeld Fabrics Company of Newburgh, New York, discovered, within such an abnormal range fuel economy hinges on the nature of the fuel and the method of firing.

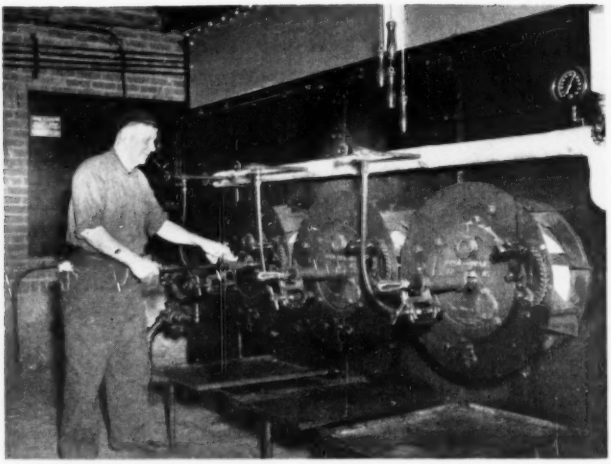
The plant's boiler house used to be coal stoked. A respectable percentage of profits could be seen literally exhausting out the stack. In a situation approaching the ideal, the rate of fuel consumption should decline sensitively as the steam load drops—especially when the drop might be as much as 13,000 pounds. Steinfeld's old coal burning system couldn't respond efficiently to this change in demand. Although stoking would cease, the excess of coal already on the grates continued to burn, and an enormous amount of heat would go to waste.

Conversely, when production in wet finishing called for increased steam loads up to 15,000 pounds per hour, an accompanying overfeed would result in a smoking stack. In addition to serving as visual evidence of fuel extravagance, the smoking stack deposited soot in the dyehouse. Much of this carbonous material found its way into easily soiled tricot fabrics. The remedy—rescouring. A serious loss of production resulted.

Conversion. Combustion engineers from the Coen Company were called in to survey the facilities. Their recommendation was, "Convert to oil firing." Two 500 hp Type "CP" Keeler boilers with furnaces 11 feet wide and 10 feet deep were installed. The boilers are fired with three mechanical burners per unit. These burners are taking the finishing plant through its range of high and low loads without any difficulty. With



BOILER HOUSE architecture allows for adequate light and ventilation. Wood tower at right of building is the old coal hopper scheduled for dismantling.



CONTROLLING AND IGNITING the supply of fuel oil to the three mechanical burners are readily accomplished. Manipulation of the burners results in flexible range of steam loads.

oil, 1½ hours are needed to reach peak steam output from a cold start-up. Coal required two hours from a banked fire.

The boiler safety valves are set at 135 pounds steam but operating pressure throughout the plant is only 75 pounds. Pumping, heating, and straining equipment is sized to take care of this condition.

The fuel oil pumping and heating system is in duplicate. In case of failure of any accessory, its twin can be pressed into service without lost production. There is one duplex Dean Brothers steam pump and one motor driven Schutte & Koerting electric pump. For cold start purposes there is one electric fuel oil heater as well as two Coen multifilm type fuel oil heaters. All main piping is in floor trenches leaving the overhead unobstructed. A. Wilson & Company, power plant contractors, made the installation.

Savings. One of the strongest motives for converting was the possibility of saving fuel. This is being effected. The Bunker "C" fuel oil now being burned is rated at 18,500 Btu's per pound. Two grades of coal formerly used had ratings of 14,400 and 13,850. Flue gas analysis revealed 12.5% CO_2 for coal as compared to 14.2% for oil. By rule of thumb there is a 23% fuel loss for every 5% increment in the CO_2 reading. Thus, the more efficient combustion indicated for oil means greater fuel economy.

Oil is being stored in a 15,000 gallon underground tank located 20 feet from the boiler room.

Georgia-South Carolina Cotton Buyers Consider Problems

During their joint annual meeting in Atlanta, Ga., recently, the Cotton Buyers Division of the Cotton Manufacturers Association of Georgia and the South Carolina Textile Manufacturers Association urged in a resolution adopted by the groups that the use of dryers, overhead cleaners, and lint cleaners by gins be carefully studied by all segments of the industry to insure that the inherent qualities of the cotton fiber are maintained so that cotton might hold its competitive position in the textile market.

The ginning committee of the South Carolina group reported that better ginning was done in 1951 than in the immediately preceding seasons. This was attributed to (1) favorable weather conditions during the harvesting season and (2) more intelligent operation of the modern ginning equipment now being used.

Fewer false packed bales of cotton were placed on the market during 1951 than in recent years, in the opinion of this committee. Mills were urged to report any false packed bales to the American Cotton Manufacturers Institute.

Other recommendations made by the group were: (1) that a strong protest be made against the practice of putting moisture in cotton at the gin; (2) that a campaign be instituted for better protection of cotton from weather by gins and trucking lines in the eastern belt; (3) that a campaign be developed through the ACMI and the National Cotton Council to insure that cotton be shipped in clean cars; (4) that an effort be made to get the railroads to stop the practice of patching car floors and roofs with asphalt.

Advocates Christian Attitude for Management and Labor

The following letter which appeared in a recent edition of "The Union Generator" — a newspaper published by Local 601 of the International Electrical, Radio and Machine Workers, CIO — has been brought to the attention of the editors. The writer, George Snodgrass, is a tester in the Westinghouse Electric Corporation's Switchgear Division plant in East Pittsburgh, Pa., and has been employed by Westinghouse for 10 years.

Editor, The Union Generator
99 Braddock Avenue
Turtle Creek, Pennsylvania

Dear Sir:

In a recent issue of The Union Generator you invited readers to contribute questions for a column called "Got a Beef?"

My question is: Why can't the Union and the People who are in the Union deal in a Christian manner with management?

It seems to me that there is more to be gained by cooperating in every possible way to try to increase the company's profit rather than to drag our feet and cuss the company for making a profit by the sweat of our brows.

The days of the coal and iron police are over and I don't think management or even the stockholders would want to go back to these methods even if it were possible. But even if it were, the purpose of our working here is to make a profit. It is our duty in all honesty to give a fair day's work for a day's pay.

The employee has a stake in the company even if he does not own a single share of stock. He has a job that represents an investment of from five thousand dollars upward. He doesn't own the job, because someone else invested the money to make the job for him. The amount of money the employee makes at the job will depend on how much money he makes for the investor. It's as simple as that. If he does not produce, it is economically impossible for him to make more money, and no amount of grievances or strikes can change it, and the employee loses his stake in the job.

Reform begins with self. If we do not deal fairly with the company, we cannot long expect them to deal fairly with us. I think that every man and woman who works should deal honestly and fairly with their employer; then if the employee does not get his just reward the Union has something definite to work on when they take the case to management.

The Union should deal fairly with management. If the Union goes to management with trifles and no kind of case for the things they hope to gain, management will soon learn to turn a deaf ear to their plea, but if each plea is justified it should not be hard to get a hearing at any time.

I hope to see the time when employees and management both deal in the Christian manner with each other, and with everybody. Why not give it a try?

GEORGE SNODGRASS

Having Trouble with "Shiners"? Check These Sources

In his presentation address in connection with the American Society for Testing Materials award of the Harold DeWitt Smith Memorial Medal to Dr. Frederic Bonnet of American Viscose Corp. [TEXTILE INDUSTRIES *for March, page 75*], *Brown Mahon of Dunean Mills Division of J. P. Stevens & Co., Inc., related the following incident while citing some of his experiences with Dr. Bonnet as a scientist and a man:*

After looking around the winders and quillers and the looms he showed us how to make a "shiner" by the simple procedure of drawing a rayon thread between his wet lips, then stretching it to produce a permanent sheen or shine in the stretched portion. Then he looked around to see where the rayon filling could be getting wet or damp and where it could be stretched due to faulty tensions. Condensation from the ceiling (it was before the days of modern insulation) was dripping on the yarn in some spots. We corrected this by stopping the dripping.

He noticed that workers were scrubbing the floors under the skein winders, while the machines were stopped, and the water was evaporating onto that portion of the skein nearest the floor. When the skein started running again we were making hundreds of short shiners by stretching that damp portion when tension was applied. We quit scrubbing the floors with water and many of the shiners disappeared.

Elimination of above-ground coal storage has added several thousand square feet of available area to the mill property. On the way out with coal went the ever present danger of coal pile dust blowing into the plant and contaminating delicately colored tricot goods.

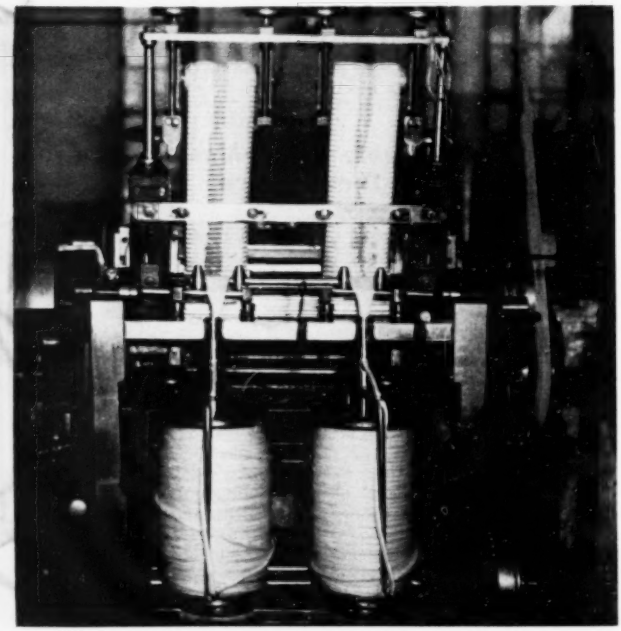
The expense of a chauffer-driven dump truck assigned to haul ashes and coal around the yards has been stricken off of the cost sheet. The coal-burning boiler house required six licensed engineers on the payroll even when heat was not required in the plant. Only two are on the job now.

Henry Keats, manager of the tricot mill, estimates a five-year amortization. Costs may be lower still. The Newburgh area is designated for an extension of a natural gas pipe line. The oil fired boilers are readily adaptable to this low cost fuel. Since construction of the new boiler house, dyeing capacity has doubled in line with a million dollar plant expansion. However, the steam output is well within the requirements.

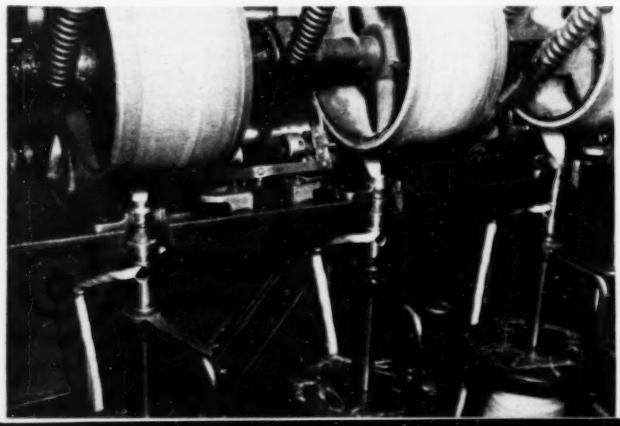
A 50-50

FIRST STEP (above). Blending at the can gill box.

SECOND STEP (below). Passage through two-spindle gill box.



NO LAPPING or eyebrowing is experienced in the drawing operations. The 50 to 60% rh in the spinning room, the anti-static finish on the nylon staple, and the large diameter top rolls account for that.



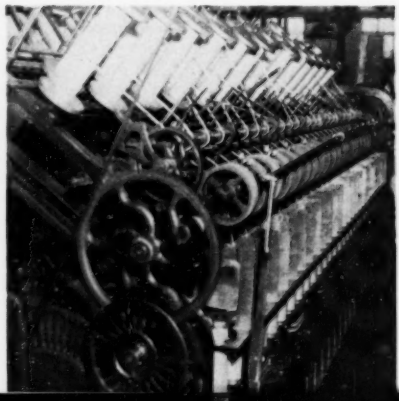
SPINNING a 50-50 Vicara-nylon blend on the Bradford system is no more problem than an all wool mix. At least that has been the experience of Priscilla Worsted Mills in Thornton, R. I. The resultant yarn is finding warm reception among half-hose knitters looking for economical but durable and cashmere-like constructions.

The blended yarn combines the virtues of both components. Nylon adds strength and abrasion resistance—and absorptiveness, softness, and drape are imparted by Vicara. Both fibers won't felt or shrink in laundering, thus yielding good dimensional stability. They are also moth and mildew resistant.

According to E. T. Strickland, superintendent of the mill, the formula for spinning this yarn is short and simple. It will allow production rates equal to those obtained with 100% wool runs.

In a capsule, Mr. Strickland's formula calls for thorough blending of nylon and Vicara tops in gilling; not more than half turn per foot twist in gilling; a low twist in drawing, reducing, and roving; ratch settings not more than one inch over staple length; light tensions from gilling through spinning; and a draft in the neighborhood of six in all operations.

LIGHT TENSIONS are required from gilling through spinning, including this 8 x 4 roving frame.



Vicara-Nylon Blend Spins Well

on the Bradford system of worsted manufacture

Here is the flow from top to yarn at Priscilla: Ball tops are processed through a can gill box, a 2-spindle gill box, a 6-spindle draw box, and an 8-spindle draw box. Then an 8-spindle finisher, an 8 x 4 rover, followed by ring spinning, twisting, and winding completes the run.

The mill purchases the fiber in top form. For this blend Priscilla uses 3-denier, 4 to 5-inch crimp staple Vicara and nylon. The 3 d fiber is equivalent to 70s wool. 2/12s and 2/18s worsted counts, 7½-Z tpi singles and 3.7-S tpi ply are spun from this blend. A Uster evenness test of the 2-ply shows it to be down in the 30% range, indicating a highly desirable uniformity.

General Precautions. Full utilization of the spinning characteristics and the fiber qualities of the two synthetics comes from homogenous blending of the tops at the gill box. Here, tops are passed through without wetting. Emulsion pans are covered with butcher paper during the run. A film or finish from the staple is deposited on equipment, leaving fallers adequately lubricated for good combing action.

Production formula calls for:

- ***thorough blending of tops in gilling***
- ***not more than 1/2 turn of twist per foot in gilling***
- ***low twist in drawing, reducing, and roving***
- ***ratch settings not more than 1" over staple length***
- ***light tensions from gilling through spinning***
- ***a draft of approximately 6 in all operations***

Staff Prepared

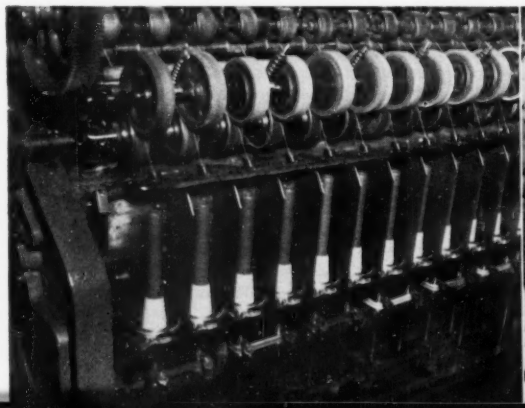
No special measures are taken to avoid static. Static nuisances have not been observed. It is felt that the finish with which the nylon staple is treated serves as good protection.

The ball top is handled by operatives with exceptional care. Vicara is soft and fluffy. It can be roughed up very easily, thereby disturbing fiber parallelization—a cause of staple breakage and nep formation. For much the same reasons, the nylon top is treated with respect. Snarls lead to faller breakage, and where tangles occur, the section is removed.

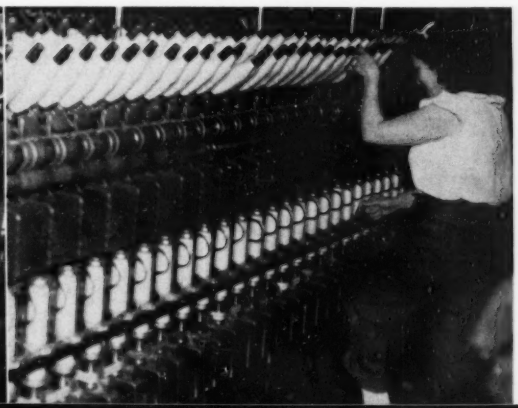
Since there might be variations in weight in either Vicara or nylon balls of top, each is sampled for average weight and then doubled and drafted accordingly. Of course, the twist in sliver must be negligible in order to permit entry through the fallers. Not more than ½ twist per foot can be tolerated in the sliver going through the gill boxes.

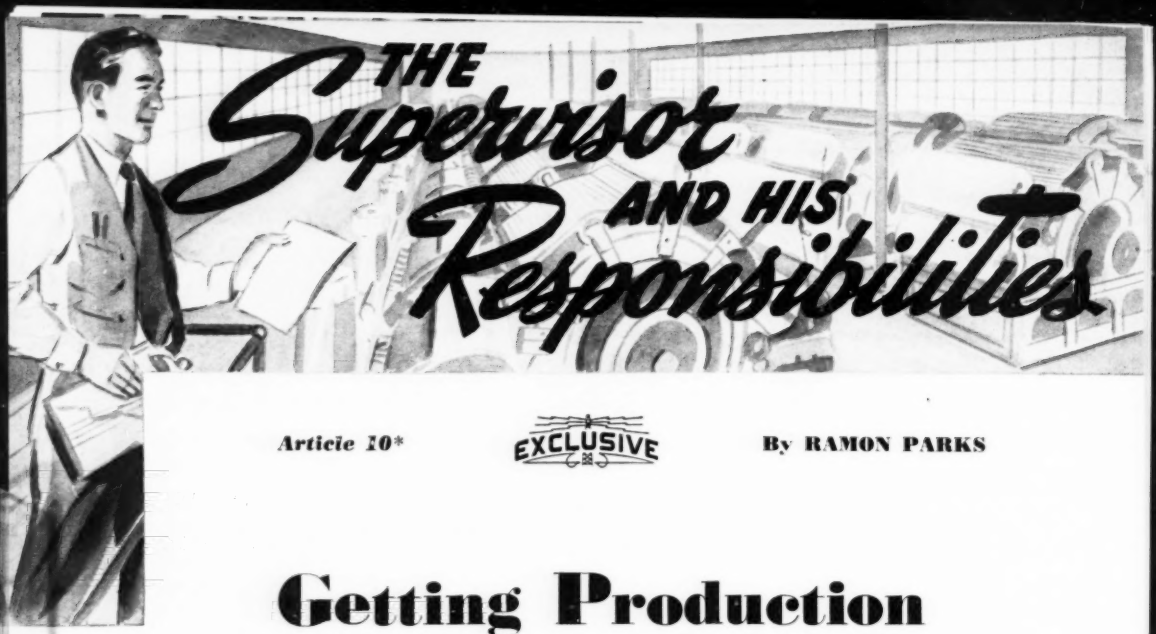
Most settings, top roll weights, and speeds conform to those used in spinning wool. Because of the high strength of the nylon component, ends down are infrequent. Eyebrowing, or lapping, rarely occurs due to the long staple length and the large diameter top rolls used in Bradford spinning.

DRAFT OF SIX in all operations is suitable. High production is obtained on the ring spinning frame.



LOW TWIST is inserted on this twister. Reducing and roving require low twist also.





THE Supervisor AND HIS Responsibilities

*Article 10**

EXCLUSIVE

By RAMON PARKS

Getting Production

THE SUPERVISOR in the modern textile plant has many responsibilities, but certainly he will have few responsibilities which are more important than getting the maximum production that his department is capable of turning out. It seems superfluous to add that this is to be accomplished at the lowest possible cost, with a minimum amount of waste, and in the safest manner possible. In addition to this, the quality of the product must be such that it can be readily used in the next department or that it will be acceptable to the ultimate consumer.

The Old Pressure System. Some supervisors seem to think that the way to get maximum production is to "bear down" on everybody in the department for every pound or every yard that the machines are capable of turning out, making everything else secondary to production. This sort of thing might work for short periods, but for longer periods of time the tension would be so great that errors, bad work, and accidents would be sure to occur. The machines would run down, and waste and costs would mount.

There are some factors which tend to improve the chances for good production, but which in most cases cannot be controlled by the foreman. Some of these are the age and suitability of the machinery; heating, lighting, and air-conditioning; the pay scale and living conditions of the employees; and not necessarily last in order of importance, the kind of cotton or other fibers or filaments being processed. In most mills the foreman may recommend improvements in some or all of the items mentioned, but the final decisions are usually made by higher authority.

There are a number of things which the overseer *can* do, however, to improve the production record of his department. The order of the factors included in our discussion are as they occur to us, rather than in order of importance.

Machinery Maintenance. No overseer can hope to get good production from worn-out, run-down machines. If the mill does not have a program of preventive maintenance, then the overseer should originate one of his own, even if only on a limited scale. The general idea is to keep the machinery in such good state of repair and properly lubricated, so that a major breakdown, which usually seriously hinders production, is unlikely to occur.

A good example of this is the requirement in some mills that when a warp comes out the loom is to be cleaned and thoroughly lubricated. It will be thoroughly checked by the loom fixer, or maintenance crew, and all necessary repairs made before a new warp is started. A serious breakdown during the running of the warp, where such a plan is in operation, is very rare.

Training of Help. Even the most modern and well-kept machinery will not turn out good production or a quality product unless operated by efficient and well-trained help. In most cases the supervisor will have at least some responsibility in the selection of all except the employees who were on the job when he took over as foreman. Training, not necessarily in

*Subjects covered in previous articles of this series: "Hiring and Training," "Employee Relations," "Cooperation," "Planning Your Work; Delegating Responsibility," "Machinery Maintenance," "Cost Control," "Quality Control," "Waste Control," and "Good Housekeeping."

Reprints of individual articles will not be available. However, if the demand for the entire series is sufficient, it will be placed in booklet form. Write the editors if you are interested.

formal classes, should be a continuous process so that even the older operatives can be kept abreast with the latest methods. Certainly the wide awake overseer will recognize his responsibility as a trainer.

Scheduling the Flow of Material in Process. We have already indicated that the foreman can do little about the basic raw material; he can, however, cooperate with the other departments, both production and staff, thus assuring a steady flow of the best possible quality material into and from his own department.

Cooperation with the regular production departments will consist of a number of things which the foreman may do. He should promptly return all empty boxes, bobbins, spools, beams, trucks, or any other containers or conveyors when they have been emptied. If any containers are being held because of bad work from the preceding department, he will call for the foreman involved and seek to have a disposition made of the sub-standard work. He will not use containers belonging to another department for waste, or similar uses, but will requisition a sufficient number of such containers for the use of his own department.

Of course, it is important that the overseer cooperate with all of the staff or service departments, such as the laboratory, training department, maintenance department, engineering department, and main office, but it is very essential that he work hand-in-hand with the production department.

Usually the production manager will want periodic reports of the stock in process within the department. Other related information may be required. It is very necessary that this information be correct; otherwise improper scheduling of the production may result. Any data which will help the production department should be furnished by the overseer. His department will in turn benefit from this kind of cooperation.

Besides the tangible things which an overseer may do to increase the output of his department, there are other factors which are somewhat harder to classify, but which are none the less important. The overseer must be able to inspire his employees to want to get all of the production possible. His personality is an important factor, and though everyone does not seem to have a good personality by nature, we are told that we can improve our personalities if we try.

Perhaps an overseer will inspire his employees by the way he goes "to bat" for them when disputes arise involving them and employees of another department or with the company. This does not mean that he must be disloyal to the company, but simply that he will see that all facts are brought to light so that fair decisions can be made.

An overseer may inspire his employees by doing all that he can to see that job loads are fair and that pay scales are equitable. Perhaps under certain conditions these things are not under his control, but if the employees feel that he is pulling for them, they are certain to do a better job.

Perhaps an overseer can be an inspiration to his people by the personal interest he takes in them, their families, and their problems. A visit to the hospital to see a member of the sweeper's family, a gift to the spinner's new grandbaby, a friendly chat with the weaver who has had a rather bad attendance record . . . these and similar things make for loyalty and teamwork, an unbeatable combination in the push for more production. (*To be continued*)

Research Findings—Viscosity Measurements

(*Continued from page* 111)

specialist, preferably a chemist, laboratory assistants can be trained to conduct the tests properly and efficiently.

These improvements have been combined into a new method for the measurement of cellulose viscosity, called the cupri-ethylenediamine method, which was first adopted officially by the American Society for Testing Materials in 1947. Since then the popularity of the viscosity measurements generally has been growing in the cotton industry. Just this past summer an improved draft of this method was adopted by the ASTM after careful scrutiny by a committee consisting of representatives from the National Research Council of Canada, the Celanese Corporation of America, the Harris Research Laboratories, the E. I. du Pont de Nemours Co., and the Southern Regional Research Laboratory.

When cotton has undergone certain types of oxidation the cellulose is very sensitive to alkalinity and would break up in the alkaline solvents referred to previously. In such cases, to determine the condition of the cellulose as it exists in the fiber, it is necessary to nitrate it. The Southern Laboratory has also worked on this problem through an ASTM committee.

On this committee all the organizations named previously, except the Celanese Corporation, were represented. Valuable assistance was also given by the Hercules Powder Company and the Rayonier Company. This committee developed a "modified nitrocellulose fluidity method" which thus supplements the cupri-ethylenediamine method. This method, too, was adopted at a recent meeting of the American Society for Testing Materials.

Further research on the application of viscosity measurements to cotton is under way. With each improvement, the potential contributions of the tests become greater—whether they are applied by scientists to explain and check cotton degradation or by cotton manufacturers as a control technique.

Wool Bureau's Research Seminar

Staff Report

ELATED is the word that best describes the feeling of wool manufacturers and technologists coming away from The Wool Bureau's three-day Lowell Seminar. They had good reason to be. A progress report of the International Wool Research Project demonstrated beyond any reasonable doubt how effectively fundamental research and practical mill operations can be combined to seek out valuable information for end uses in textile manufacturing.

More important, the new instrumentation developed in the course of investigation and the added knowledge of fiber behavior gleaned from controlled mill trials provide building blocks for future improvements in the industry.

One adjunct of the project confirmed the reliability of the core-boring technique for determining mill yield (see TEXTILE INDUSTRIES, January 1950, pages 77-92) and showed its value as a means of obtaining samples for the establishment of the fineness of a wool lot prior to manufacture. This latter virtue of coring is of no small consequence. The wool project revealed that average diameter of fiber in a wool lot is an important factor, probably exerting a greater influence than any other fiber characteristic in the efficiency of carding, combing, drawing, spinning, and dyeing operations.

At the seminar, the broader aspects of both the practical and specific phases of the three year old wool project were presented for the first time to the general industry. By-product information obtained from controlled processing experiments appear to offer possibilities for simplifying and improving the worsted system of manufacture.

Three highly significant findings of the project are:

(1) All wools of the same fiber diameter are basically similar, both physically and chemically, regardless of geographical source.

(2) Periods of rest to overcome fatigue resulting from different conversion processes reduce breakage and thus improve spinning and weaving qualities.

(3) Yarns spun from medium wools were found after dyeing to have darker shade than those of fine wools dyed under the same conditions.

TEXTILE INDUSTRIES' condensed report of the Lowell Seminar follows:

Wool Morphology. Chemical composition of four wools gathered from separated parts of the world were similar, including cystine and amino acid content. Each wool behaved similarly during processing with no large chemical changes taking place. Alkali solubility remained fairly constant during all stages of processing until dyeing. After dyeing, increased alkali solubility was observed — probably caused by strong acid conditions required for the metallic dye used.

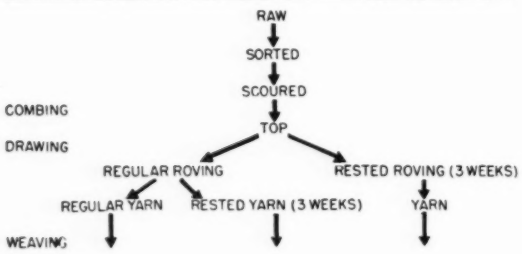
Crimp. Crimp level is an important factor in aging, after the making of top, roving, and yarn. Measurements of progressive energy required to uncrimp wool fibers during the aging period show a gradual return of fiber crimp upon resting—a relationship to the general relaxation effects encountered in the normal aging of wool in manufacturing plants.

Fiber Properties. On basis of unit cross-sectional area, four master wools were similar in basic physical properties. Throughout the aging period after manufacture of top, roving, and yarn, no marked changes in elastic modulus, breaking stress, or breaking elongation occur. (This confirms the characteristic of fineness as being the most important difference among wool types.)

Aging. Weaving efficiency in-

TABLE I

HOW MASTER WOOL LOTS WERE DIVIDED FOR MILL PROCESSING



From the raw stock to the finished piece, 10 weeks elapsed for the regularly processed control sample. The samples finished from rested stock were processed in 14 weeks. The only deviation from standard mill procedure consisted of the necessary sampling at various stages of manufacture, the resting periods used, and the special instrumentation and recordings for observation. There were no machine settings or speeds changed by mill operatives without the knowledge and collaboration of laboratory personnel. Room temperatures and humidity, solution temperatures (where applicable), and the moisture content of the wool were measured hourly. Main samples were obtained at doffing time in carding, combing, drawing, spinning, and weaving operations. Weight balances were computed throughout processing by keeping account of input and output weights, waste, moisture regain, vegetable matter content, and grease content.

at Lowell

creases when yarn is aged three weeks prior to weaving. Cost of burling and mending goes up proportionately with yarn breakage, and is thereby related to aging benefits.

Aging roving for three weeks at 70 F and 70% rh increased spinning efficiency.

After aging, strength and stiffness of top and roving change markedly. Observed changes in fiber assemblies (top, roving) are related to the level of fiber crimp which increases with aging. Aging period is related to the relaxation of stresses imposed upon wool fibers by previous processing operations. As stresses relax, single fibers behave differently and in a cooperative manner in top and roving.

Normal aging periods can be shortened to several minutes by a steaming treatment of top and roving.

No changes in stiffness, breaking strength, and breaking elongation of singles or doubles yarn results throughout aging period.

Scouring. Raw wool scoured to 0.25% free fat content behaves excellently in combing and spinning. Reducing the free fat content below the accepted 0.75% limit does not adversely affect subsequent processing. Under identical conditions of soap-soda scouring, Australian fine wool was left with residual grease content of 0.27%, the domestic wools with 0.68%, and the New Zealand medium wool with 1.38% — indicating that scouring is the only processing operation which depends upon the influence of the source of wool.

Spinning. Approximately 40 fibers per yarn cross section represent a lower limit for economical spinning on a French worsted yarn. At 30 fibers, the number of ends down in spinning was found to be

TABLE II

PROCESSING LAYOUT	COMMENTS
5 bowl scouring train	(800-1200 pounds / hour)
carding	(weight of card sliver — 8 ounces / 5 yards)
1st gilling	(draft — 5 to 6)
2nd gilling	
3rd gilling	(weight of sliver leaving 3rd gill — 1.6 ounces / 5 yards)
combing	(11 pounds / hour)
assembly box	(assembled sliver weight — 4 ounces / 5 yards)
backwasher	(110° F. in scouring bowl, 160° F. in dryer)
finishing gill	(finished top weight — 3.2 ounces / 5 yards)

TABLE III
CARDING PERFORMANCE
(average of four cards)

	Carding Rate lbs /hr	Card Waste %	Nep Count 15 gm sliver
Fine Australian	67.0	4.7	480
Fine Domestic	77.7	4.1	478
Medium Domestic	85.8	4.2	92
Medium New Zealand	77.5	4.9	155

TABLE IV
YIELD

	Mill Yield %	Top & Noil %	Difference %
Fine Australian	59.9	55.6	4.3
Fine Domestic	52.3	47.8	4.5
Medium Domestic	51.7	48.8	2.9
Medium New Zealand	55.4	54.2	1.2

TABLE V
DRAWING OPERATIONS
80° F - 70% rh

Operation	Doublings	Draft
1. Mixer Intersecting Gill Box	30	6.5
2. 1st Intersecting Gill Box	2	6.5
3. 2nd Intersecting Gill Box	3	6.3
4. Draw Box	2	4.5
5. Reducer	2	4.0
6. Slubber	2	4.0
7. 1st Intermediate	3	4.1
8. 2nd Intermediate	3	4.0
9. Forefinisher	2	4.0
10. Finishing Rover (3.2 ounce top)	2	4.0

TABLE VI
SPINNING OPERATIONS

Operation	Comments
1. Spinning	SACM frames, draft — 9.4, front roll speed — 100 to 122 RPM
2. Steaming	Riggs and Lombard Steamer
3. Doubling	Foster
4. Twisting	Hays frames
5. Steaming	Riggs and Lombard Steamer (wet bulb — 175°, dry bulb — 185°)
6. Examining	
7. Weighing	

TABLE VII
WOOL GRADE VS. SPINNABILITY
(40s/1 worsted count)

Wool	RPM Front Roll	Draft	Doff (meters)	Traveler No.
Fine Australian	115	9.4	3300	21
Fine Domestic	115	9.4	3000	21
Medium Domestic *	85	8.8	2700	21
Medium New Zealand *	85	8.8	2700	22-19

* The medium wools produced 50% less ends down when spun as 37s/1. Consequently, fine wools in this trial were spun as 40s/1 while the medium wools were spun as 37s/1.

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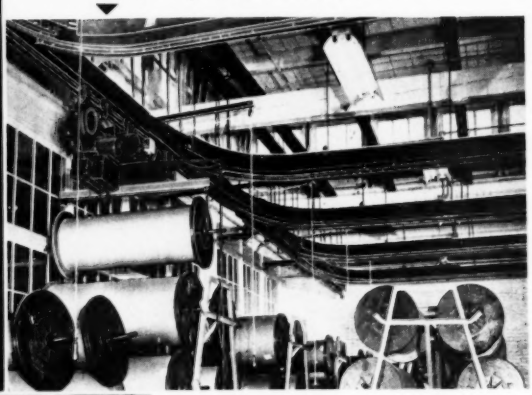

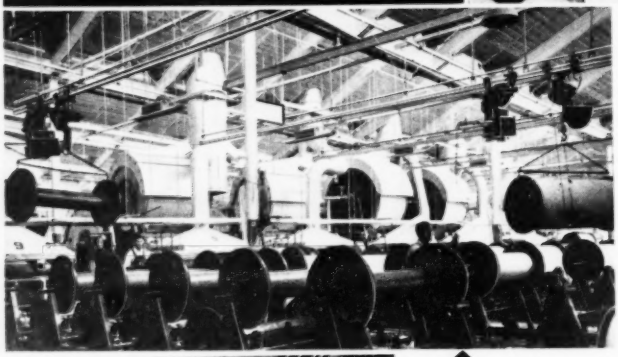

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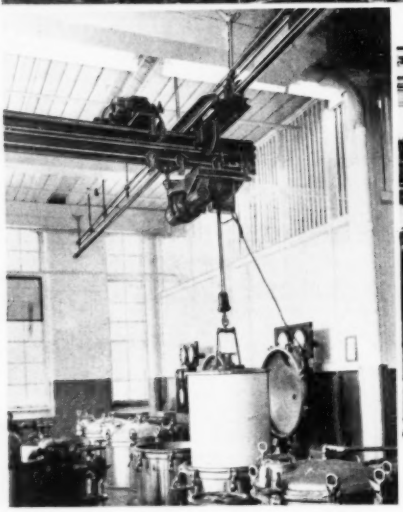

Crane covers long loom alleys

MonoTractor crane service dye kiers

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excessively high. Between 30 and 40 fibers there is a very sensitive dependence of ends down in spinning on the number of fibers per yarn cross section.

Fiber Surface. Susceptibility of wool fibers to surface dye or stain progresses gradually and increases through principal worsted operations up to time yarn is spun. Following steaming of yarn to set twist, surface-staining capacity of the fibers decreases sharply to a level approximately that of scoured wool. Surface scales on fibers turn upwards as they progress through mechanical processing, increasing susceptibility of the fibers for dye. After steaming, surface scales lie down again, decreasing susceptibility.

Dyeing and Finishing. Fabrics made from finer grades of wool dye lighter shades than fabrics made from medium grades dyed under similar conditions. Shade difference of 20% occurs between fine Australian wool fabrics and medium wool fabrics when dyed separately. In the same bath, a dyeing of these two fabrics produces a 30% difference in shade. There is a 5% difference of dye absorption between each grade of wool.

Dyeing characteristics are not affected by resting of wool in the roving or yarn.

Fine wool fabrics increase 4% in length after scouring in dolly washer. Medium wool fabrics increase about 2% after similar scouring. Following dyeing, fine wools decrease 5% in length and medium wools decrease 4% in length, leaving a net shrinkage of 1% for fine wools and 2% for medium wools after both scouring and dyeing.

Between grey and finished fabric, there is a loss of strength of approximately 24%. Half this loss takes place after ready-to-dye operations.

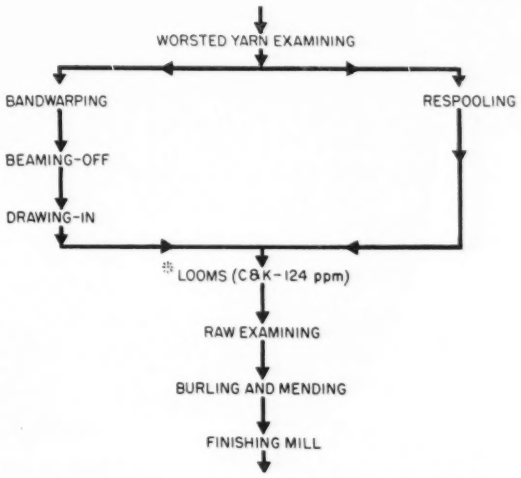
Flex abrasion of fabrics shows no loss prior to dyeing. 50% less flexures are required to cause breakage of fibers after dyeing.

Drape and bending characteristics are related to fiber fineness. Finer wools have more acceptable draping qualities. (*Report of this meeting will be continued in next issue.*)

TABLE VIII
SPINNING PERFORMANCE OF RESTED VS. UNRESTED ROVING
(ends down per 1000 spindle hours)

	Fine Australian	Fine Domestic	Medium Domestic	Medium New Zealand
Unrested Roving	41.5	46.5	240.5	269.5
Rested Roving	27.0	58.5	169.5	246.0

TABLE IX
WEAVING OPERATIONS
(2 x 2 twill serge)



*In all instances, rested yarn showed 90% or better weaving efficiency, a level consistently higher than that established by the unrested yarns. Medium New Zealand Wool benefited the most from aging.

TABLE X
FINISHING PROCEDURE

1. Tacking
2. *Dolly Washing
3. String Pulling
4. Opening and Scutching
5. Examining
6. *Crabbing
7. *Drying
8. Tacking
9. *Dyeing
10. Squeezing
11. *Drying
12. Color Examining
13. *Steaming
14. *Shearing
15. Specking
16. *Semi-Decating
17. Final Examining

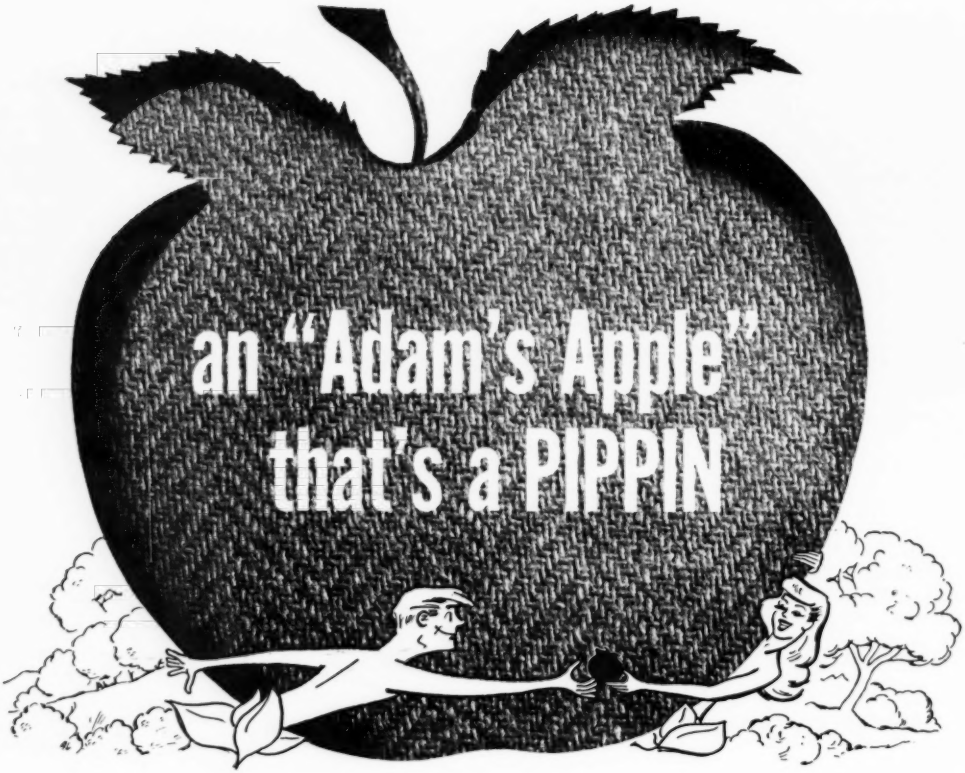
* Causing some physical effect on the cloth.

TABLE XI
SPECKING ANALYSIS

	Fine Australian	Fine Domestic	Medium Domestic	Medium New Zealand
Vegetable Matter (%)	.004	.130	.110	.007
Specking Time (avg.hours)	1.5	5.9	6.8	2.7
Cost (cents/yard)	8.4	33.0	38.0	15.1

TABLE XII
GENERAL PROPERTIES OF FINISHED FABRICS

	Fine Australian	Fine Domestic	Medium Domestic	Medium New Zealand
Weight (oz/sq yd)	7.9	8.0	7.7	7.5
Picks/Inch	68	69	66	65
Ends/Inch	70	69	66	66
Relaxation Shrinkage				
Warp	1.7	2.4	0.8	1.1
Filling	0.9	1.8	1.0	1.3



You've probably heard them say in the industry: "Wetting agents are like Adam's apples, everybody's got one." And by "everybody," of course, they mean the makers of textile chemicals.

We're no exception; we have an "Adam's apple"—and it's a *pippin*. We offer it in the firm belief that it will not only benefit *you* but all the Adams and Eves who utilize your fabrics.

Our product is Nopco® 1086-A—an excellent wetting and rewetting agent, applicable in mild alkaline, mild acid, and neutral solutions.

We are confident 1086-A, one of the quality chemicals of our outstanding NOPCOWET* Series, will do a remarkably good job for you in numerous operations, and suggest you'll find it especially advantageous when employed as—

(1) a wetting agent in starch and softener mixes;

(2) a penetrant in the application of enzyme desizing agents;

(3) an agent for imparting a high degree of absorbency to greige goods prior to dyeing (in fact, an all-purpose dyeing assistant);

(4) a wetting agent in the processing of wool for chlorine shrinkproof treatment.

Nopco 1086-A sells competitively. In fact, it saves money for its users, since in virtually every application it proves more economical than comparable agents of this type.

If you are not using Nopco 1086-A already, consult with us. We'll gladly supply full information, and have our Technical Service Department work closely with you to achieve improvements . . . obtain goods with appeal that results in more satisfied customers and a bigger bite out of the market for you.

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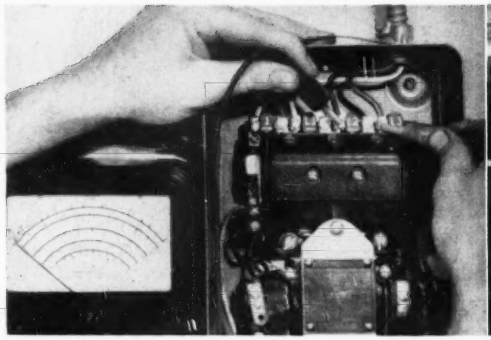
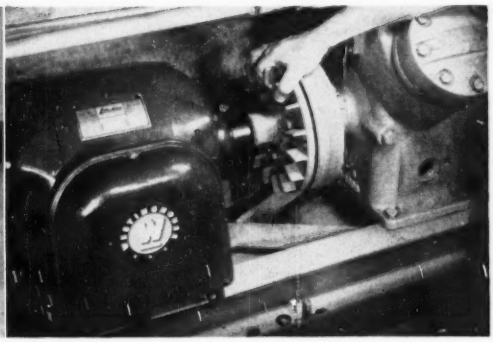


CHECK VOLTAGE at line terminals with voltmeter or test lamp if motor does not turn over and is quiet. If no voltage at starter, check main switch and line fuses.



TRY TO TURN MOTOR SHAFT when motor does not turn over but growls or is noisy. If it does not turn freely, the load is jammed or the bearings are seized.

Hints on Motor Maintenance

FOUR well-known symptoms of motor trouble, their causes, and suggestions for maintenance procedure have been outlined in this concise manner by Benjamin Hantman, works engineer of the Motor and Control Division, Westinghouse Electric Corp., Buffalo, N. Y.:

SYMPTOM 1: Motor does not turn over and is quiet.

Causes: Motor not getting voltage: main line open; control circuit open.

Procedure: A. Check voltage at line terminals with voltmeter or test lamp.

B. If no voltage at starter, check main switch and line fuses.

C. If power is available, check contactor to see if it is mechanically free to operate.

D. If contactor operates freely, check control circuit for possible open circuit as follows:

(1) No voltage across the contactor coil means it is probably all right, and the control circuit is open elsewhere. Double check coil by measuring its resistance. BE SURE POWER IS OFF.

(2) Check control contacts, motor overload relay, or motor protector.

(3) Since most contacts are enclosed, check with a voltmeter. A voltage across any contact indicates it is open.

(4) Check for frayed wires and poor terminal connections. Vibration often is the cause of loose connections.

SYMPTOM 2: Motor does not turn over, but growls or is noisy.

Causes: Mechanical jamming; under voltage; faulty motor.

Procedure: A. Try to turn motor shaft. If it does not turn freely, the load is jammed or the bearings are seized.

B. If shaft runs freely, check line voltage with motor on the line. If voltage is less than 10% below name plate rating, motor can't start under load. If voltage is within rating and it is a three-phase motor, check all three phases. One line may be open.

C. If it is a repulsion or d-c motor, check brushes for contact with commutator. Check for dirty commutator.

D. If it is a capacitor motor, check centrifugal switch or relay for operation; it may be stuck open, leaving the starting winding disconnected. Check capacitors by measuring with a resistance meter.

SYMPTOM 3: Motor does turn over, but will not get up to speed.

Causes: Under-voltage; overloaded motor; poor commutation.

Procedure: A. Check line voltage under motor starting conditions. It should not dip to less than 10% below the motor rating.

B. If voltage is satisfactory, motor may be overloaded. See that motor size is correct.

C. If it is a repulsion or d-c motor, check for worn brushes or a dirty commutator. If it is a capacitor motor, perhaps the centrifugal switch isn't open-

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5. Union Underwear Co. Campbellsville, Ky.
6. Beaunit Mills Coosa Pines, Ala.

New Science Needed to Find Best Uses for Each Fiber

The vast array of new textiles made possible by the rapid appearance of additional synthetic fibers creates a need for a whole new science to find the best uses for each fiber, the American Chemical Society was told at its 121st national meeting.

This new science would relate the functional performance of garments and textiles to their structure, the conditions of service, and the properties of the fibers from which they are made, Dr. Winfield W. Heckert, assistant general manager of the Du Pont Company's Textile Fibers Department and head of its technical division, explained.

Pointing out that as more and more new fibers are developed, the study of market acceptance becomes all the more important, Dr. Heckert said:

"This is a field in which there are innumerable variables, and only a small beginning has been made in attempting to unravel some of the more important relationships."

Even in the face of exhaustive performance data, plus an accurate knowledge of production costs, he continued, it is not possible to predict market acceptance with any degree of accuracy.

"The appearance in rapid succession of a series of new synthetics," said Dr. Heckert, "has provided the textile industry with new degrees of freedom.

"To the alert in the textile industry," he continued, "this represents opportunity. To those who resist change, this represents a hazard. To the ultimate consumer, this means an opportunity to choose between a vast array of new textiles offering superior values. To those of us who are interested in fiber and textile research, this represents an opportunity to have a hand in the unfolding of a new branch of science."

ing, leaving the starting winding on. This will result in eventual capacitor burn-out.

SYMPTOM 4: Motor gets up to speed, but runs too hot.

Causes: Under- or over-voltage; poor ventilation; overload; faulty coupling; centrifugal switch, or starting relay.

Procedure: A. Don't guess—measure the motor winding temperature with a thermometer. A piece of clay or even chewing gum stuck on the bulb end before it is inserted into the stator winding will help get an accurate reading. It should not exceed 90 C (194 F). Winding temperature is affected by ambient or enclosure temperature.

B. Ambient temperature should not exceed 40 C (104 F). Most drip-proof motors are rated a 40 C temperature rise (by thermometer) over a 40 C ambient, and include a 10 C safety factor.

C. Check ventilation of motor enclosure to see that the openings are not clogged with dirt or lint. Look for other obstructions.

D. Check motor itself to make sure it is not fouled with dirt. A motor needs plenty of breathing spaces if it is to run cool.

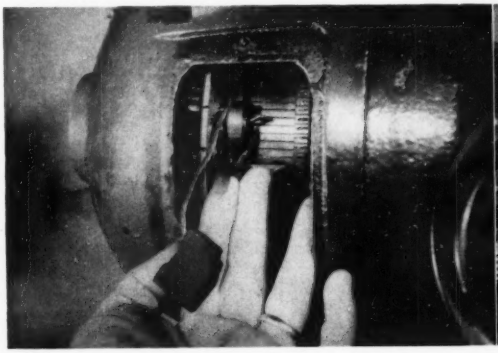
E. Check the line voltage to see that it is within 10% of rated value. Either over- or under-voltage will cause motor heating. If it is a three-phase motor, check all three phases.

F. Check the motor current against the name plate current to see if the motor is overloaded.

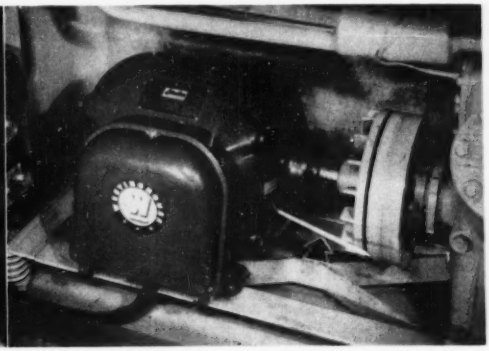
G. Check the line-up of the motor and its load. Maybe one or the other has shifted its foundation. Misalignment causes added motor load, as well as rapid wear of couplings or belts.

H. Check proper operation of centrifugal switch or starting relay of single-phase a-c motors, and the starting mechanism of repulsion and d-c motors. Make sure the motor is not cycling (repeated frequent starts) due to faulty control circuit operation.

CHECK FOR WORN BRUSHES or a dirty commutator if a repulsion or d-c motor turns over but will not get up speed.



MEASURE WINDING TEMPERATURE with a thermometer if motor gets up to speed but runs too hot. It should not exceed 90 C (194 F).



Helping Produce the Country's Textiles

RHOADS TANNATE BELTING PROVIDES MORE CONSISTENT PRODUCTION AT LOWER COST!

Within the shadows of textile's search for newer and better production methods, Rhoads Tannate leather belting is pacing textile's modern advances of today by helping to produce more yarn and more cloth at lower cost. These results are not by accident; they are the effects of Tannate's special and unusual characteristics which are "tanned in" by Rhoads exclusive process. In fact, every inch of Tannate, regardless of width and length, is "custom-manufactured" to meet standard as well as special requirements.

If you have any questions about Tannate, ask your Rhoads sales engineer for details, or write J. E. Rhoads & Sons, 35 N. Sixth Street, Philadelphia 6, Pa.

NUMEROUS COTTON MILLS STANDARDIZE ON TANNATE

Better Service, Lower Costs, Prompt Wide Use

Today, determined to cut costs, many mills are standardizing on Tannate Leather Belting. And, for a good reason. Tannate has a higher overload capacity that permits continuous uniform production, thus lowering belt costs per loom hour. Its higher coefficient of friction enables Tannate to transmit power at 97 to 99% of efficiency over a wide range of tensions. The flexibility of Tannate makes it adaptable for use with short center drives and higher pulley ratios. Tannate requires a minimum amount of maintenance, too. All this adds up to more yarn—more cloth at lower cost.

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Familiar to textile men all over the South, C. R. Mitchell began representing J. E. Rhoads & Sons in 1916, has been manager of the Atlanta sales office since it was opened in 1924. Mill men like to call on "Shorty" Mitchell, as he is nicknamed, to get his ideas on the subject of textile leathers. His long experience in the field has proved helpful many, many times. In fact, "Shorty" and his capable staff welcome the opportunity to lend a helping hand to any mill with an industrial leather problem. Quick contact can be made with Rhoads Atlanta office by telephoning Walnut 5915 or writing J. E. Rhoads & Sons, 88 Forsyth Street, S.W., Atlanta, Georgia.

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Quality Control Conference

at Georgia Tech attended by mill men from Canada to Texas

Staff Report

THE TEXTILE Quality Control Association held a successful conference at the Georgia Institute of Technology Harrison Hightower textile building, Atlanta, on April 3-4. Mill representatives from Canada to Texas attended the sessions and heard ten speakers expound the practical aspects of several phases of textile quality control.

Carl R. Harris, vice-president, Erwin Mills, Inc., and president, N. C. Cotton Manufacturers Association, told the group that customers expect textile finished goods to be free from all defects—an objective impossible to achieve but which must be approximated as closely as possible. Four objectives of quality control were set fourth: (1) make it better; (2) make it cheaper; (3) make something new; (4) make it so the trade wants it, and will give it preference when other factors are equal. Mr. Harris emphasized that despite the importance placed upon the function of a quality control laboratory, he would not concede first importance to anything but good supervision. "We must

Topics Discussed at the Meeting:

Significance of Quality Control

Applied Statistical Quality Control

Quality Control from Customer's Viewpoint

Tar Spots and Quality Control

Application of Fiber Fineness to Quality Control

Abrasion Resistance Measurements and Quality Control

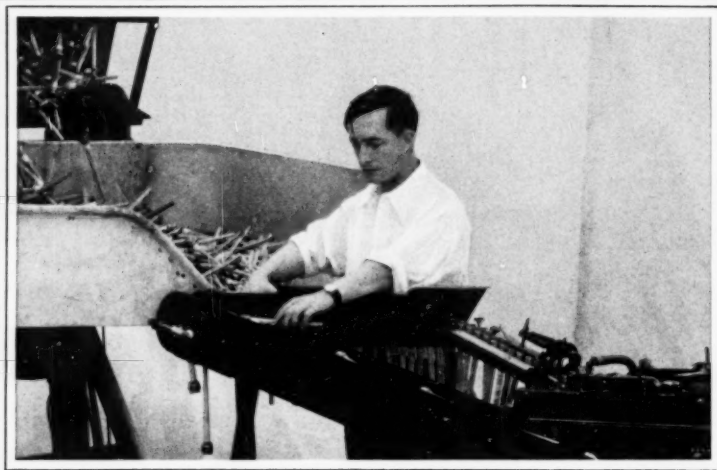
Effect of Moisture on Capacitance Type Evenness Testers

High Speed vs. Low Speed Operation of Uster Tester

Function of Quality Control Department

PICTURE OF A MILL MAN

Saving Money



WITH TERRELL'S MODERN TYPE L BOBBIN CLEANER

He is

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- REDUCING HANDLING EXPENSE
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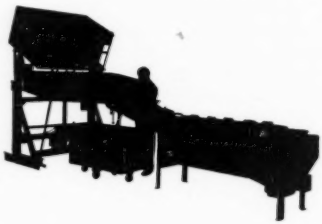

Terrell's versatile Type L Quill Cleaner has introduced important savings in removing wool, worsted, spun rayon, continuous filament, and most cotton waste from automatic loom bobbins.

To assure greatest savings, call on Terrell quill-cleaning specialists for an appraisal of your bobbin cleaning and handling problems.

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still depend upon men and machines being brought together in the proper manner if we are to achieve success, and good supervision is the only way to do this," he said.

Norman H. Chandler, research physicist, Thor Mills Ltd., Canada, spoke about the correlation between the value of average per cent unevenness derived from Pacific evenness testers and the true coefficient of variation of the sample. Proceeding on equations proved by J. G. Martindale (work previously published), Mr. Chandler found that yarn or sliver unevenness may be statistically controlled and that any wide variations outside these limits may be discovered and eventually remedied. Low spinning drafts produce superior yarns, according to substantiating results obtained at Thor Mills, which operates approximately 400 spindles on 100% nylon staple.

The average per cent unevenness of a yarn or sliver as calculated from a Pacific evenness tester chart is a measure of the irregularity produced in the yarn or sliver by processing machinery superimposed upon an irregularity due to the random distribution of the fibers in the material. Continuing, Mr. Chandler said that the unevenness of a 40s/1 yarn spun from 1½ denier nylon staple has the same value of unevenness as a 20s/1 yarn spun from 3 denier staple nylon, provided conditions of processing are equal. This is attributed to the fact that both yarns are composed of the same material, and that the number of fibers in the cross-section of the two yarns is the same.

Lawson W. Turner, Jr., vice-president, N & W Industries, outlined "Quality Control from the Customer's Point of View." Understanding between producers of piece goods and users of piece goods is essential for advancement of textile markets, he said. Mr. Turner, a member of the Southern Garment Manufacturers Technical Advisory Committee, set forth the following problems encountered by the garment manufacturers:

Finishing. Lack of uniformity in hand; slick or starch finish; waviness and curved materials; uneven widths; excessive abrasives in goods; crooked plaids.

Spinning and Weaving. Misweaves; mixed filling; machine defects; excessive slubs; trash.

Color. Variations of shade within bolt; variations of shade among bolts; variations of shade within shipment; variations of shade among mills.

Identification and Packaging. Lack of necessary information on outside of bale; fabrics not assorted to bale as to length and width of bolts; stuffing one yard in center of bolt to secure it; flimsy or no end boards; content information marked on side or bottom of bale; bolts not properly marked; too many paper stickers.

TESTING EQUIPMENT EXHIBITS in the foyer of Georgia Tech's Harrison Hightower textile building afforded conferees an opportunity to view recent developments in this field.

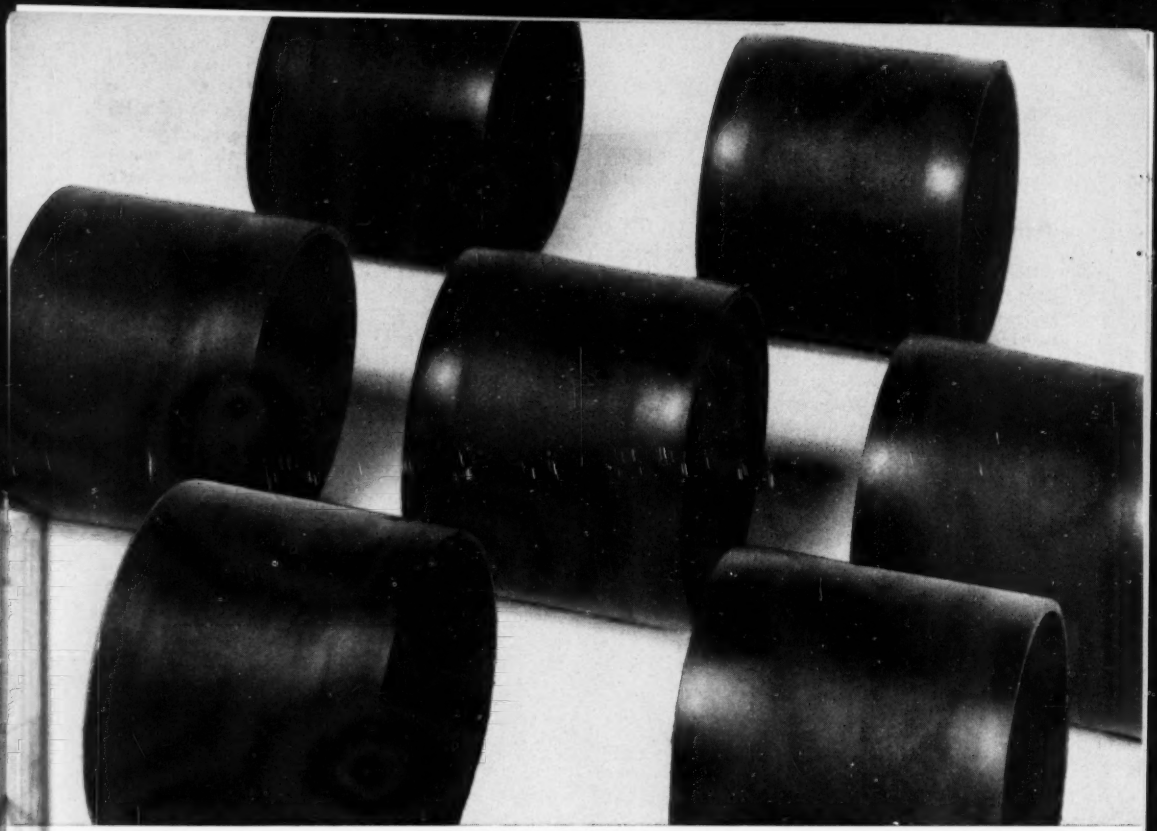
Dr. Jack Compton, technical director, Institute of Textile Technology, reviewed the problem of tar spots and their relation to quality control. (Detailed information on tar spots is available upon request. Write to Editor, TEXTILE INDUSTRIES.)

R. Hobart Suther, Cone Mills Corp., presented a resume of extensive laboratory investigations into the occurrence of tar spots. A Cone Mills laboratory studied the effectiveness of various solvents in removing tar spots and found that tetrachlorethane was best. Tetrachlorethane was accepted for use in developing a spotter for removing the spots on goods after bleaching and prior to dyeing at Cone Mills.

Mr. Souther described the test method now in use at Cone Mills for determining the presence of tar spots on baled cotton as follows: Saturate a white paper towel with tetrachlorethane. Press saturated paper towel against side of bale or against top or bottom. When testing inside of bale, place saturated paper towel between layers of cotton and press layers together. Make six tests on the outside of bale (top, bottom, and all four sides), and six tests on inside. If the spots are tar, inspection under ultra-violet light gives a characteristic halo exhibited by no other compound thus far observed. The method may be adapted for cloth or cotton in any stage of processing.

Upon scraping the outside of the bales of cotton to remove as much tar as possible, the number of tar spots occurring in the bleached goods was reduced from about 6.5 per yard to about 2.5 per yard. By spotting the bleached goods all the tar spots can be removed in the subsequent dyeing process, according to Mr. Souther.

Joseph L. Delaney, superintend-



These aprons ran more than eight years

Aprons like them may give you up to twice the apron life you now get

If you're interested in longer apron life, the picture at the top of this page will tell you its own story. It's from an unretouched photograph. It shows some of the Accotex® Aprons taken from a leading Georgia mill after they had run eighty hours a week, continuously for 8 years and 4 months.

These aprons show wear, of course. After all, they've rubbed over the nose bar millions of times and turned out a lot of work. Yet notice how smooth they are, how free from surface cracks. Notice, too, that there's no sign of stretching, no curled edges. In fact, these aprons will still fit snugly on the mandrel on which they were made.

Outstanding service like this is not unusual with Armstrong's Accotex Aprons. For you, it means that if you are not already using this modern synthetic apron, you should be able to increase apron life up to twice what you now get.

Accotex Aprons wear well and run well because of their patented three-layer construction.

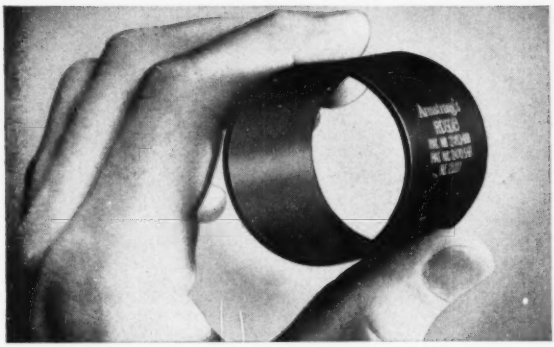
The smooth outer drafting surface is made of a specially compounded synthetic rubber. This rubber is extremely scuff resistant. In addition, it is given a patented treatment that gives it the satiny smooth finish that's typical of an Accotex Apron. That surface won't crack or become oil soaked even after years of service. It's truly clean running.

Next is the interliner, made of tough cord. It's the reason Accotex Aprons won't stretch in service, as proved by the photo above.

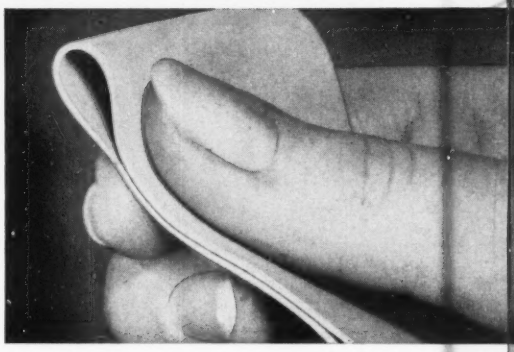
Finally, there's the inner layer, also made of tough synthetic rubber. It is compounded to resist abrasion. Vulcanized together with the other two layers, the result is an apron that drafts well, runs clean, and lasts a long time.

Accotex Aprons are made to fit all long-draft equipment. Call your Armstrong representative to arrange a test installation or write Armstrong Cork Co., Textile Products Department, 3605 Arch Street, Lancaster, Penna. Available for export.

SATIN SMOOTH. Rub your fingers across the surface of an Armstrong's Accotex Apron. You can't beat it for smoothness, and you can depend on it to *stay* smooth.

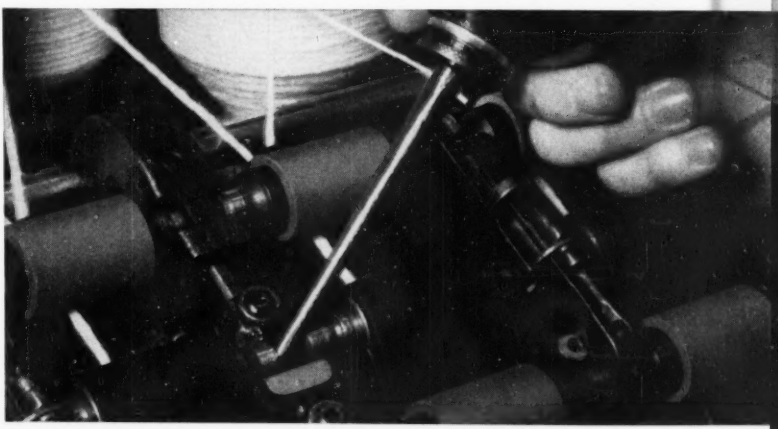


NO SEAMS. Inside and out, Armstrong Aprons have no seams to cause irregularities in the yarn. Seamless construction insures against breaks or cracks.



SUPER-FLEXIBLE. Accotex Aprons give you the extra flexibility so necessary on single-apron systems if they are to hug the nose bar closely.

OIL RESISTANT. Accotex Aprons don't absorb oil or soften from exposure to oils, dyes, and commonly used textile solvents. They won't sweat under any normal mill condition. This, plus the patented Armstrong treatment, gives you aprons that run clean year after year.

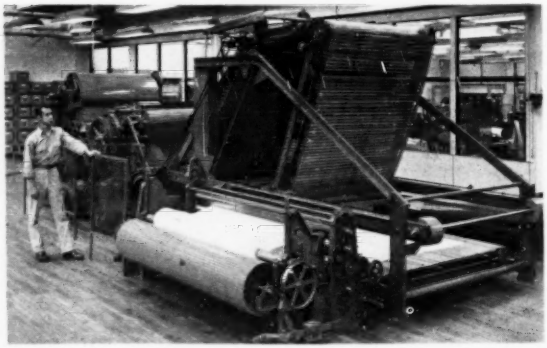


ARMSTRONG'S ACCOTEX APRONS

One of Armstrong's complete line of textile mill supplies

Non-Woven Fabric Research Facilities

American Viscose Corporation has rounded out its facilities for research in bonded fibrous materials by installing new Proctor and Schwartz web and batt forming equipment at Marcus Hook, Pa. This machinery is designed to produce garnetted fibrous webs and cross-laid mats up to 84 inches wide such as are used in the manufacture of non-woven goods and mats for insulations, stuffing, and filling purposes. The equipment is full-size and will be used for pilot production as well as experimental purposes.



ent, Joanna Cotton Mills Co., described a system of blending cotton by fineness and its effect on quality control. (For complete details of the system see "Joanna Blends Cotton by Fineness," TEXTILE INDUSTRIES, page 131, January 1952.)

Dame S. Hamby, North Carolina State College, commented on the effect of moisture on capacitance type evenness testers and related that dry yarns show more variation than moist yarns. In summarizing some of the important considerations in using the Uster evenness tester, Mr. Hamby placed emphasis on (1) even distribution of moisture in the sample; (2) having the machine "zeroed in"; (3) correction for machines not properly adjusted or "zeroed in"; (4) consideration and recognition of the influence imposed by the form or shape of the stock going through the machine (including such factors as false twist).

It was explained that the difference in moisture regain among different fibers would have an effect on the readings when checking blends; however the dielectric characteristics of fibers commonly used in blends do not differ sufficiently to adversely affect the test results on the Uster tester.

Dr. Herbert F. Schiefer, director of textile research at North Carolina State College, presented some data regarding the measurement of abrasion resistance of various materials; however Dr. Schiefer explained that the data were inconclusive in that additional study is necessary to fully evaluate the possibilities.

Arthur E. West, Textile Research Department, American Viscose Corp., compared test results on the Uster tester when operated at slow speed (1-8 yards per minute) and results when operated at high speed (50-100 yards per minute). He stated that at 100 yards per minute much more yarn may be checked without adversely affecting accuracy. Only slight variations in results are evident at high speed and do not have to be corrected. In this instance the tests were made only on synthetics, and maximum speed to secure satisfactory results was established at 100 yards per minute for yarn. Roving and sliver must be checked at slower speeds because too much tension may stretch or break the strand.

Operated at high speed the tester gives good results which are representative of the yarn being tested, and the needle variations are more nearly constant, according to Mr. West. For complete accuracy all comparative tests should be made in the same day, or at least during the same week in that tube wear and other variable factors may cause variations which should not be attributed to the yarn.

Running the tester at high speed is of especial value when it is necessary to test a large quantity of yarn, he said. Mills using the Uster tester should check the maximum and minimum limits of speed which would be satisfactory for each type of yarn tested in each mill. Changes in tension on the yarns affect the recorded results and may warrant special consideration in some instances. High speed operation of the tester is an improvement over low speed operation in the applications at American Viscose, he concluded.

W. A. Thomason, Jr., Saco-Lowell Shops, secretary of the Textile Quality Control Association, told the group that a properly functioning quality control department serves as an information gathering agency for mill management. Its purpose is to collect information necessary to the technical operation of the plant. Continuing, he said that any quality control operation becomes a compromise between the level of perfection desired and the price one can afford to pay for the operation.

No control action can be initiated until three questions have been answered. The questions are: (1) What corrective action is necessary? (2) In what direction should the corrective action be taken? (3) How much correction is required? Based on the three immediate requirements, the first duties of a quality control section are to keep all supervisory personnel informed as to what product properties get beyond standard limits, whether too high or too low or in what direction, and also the magnitude or amount of the error.

Announcement!

ACETATE BLACK DYERS . . .

amazing new developments have been taking place in the improvement of our **AMACEL* BLACKS.**

Absolutely tops! the NEW, IMPROVED

Amacel BLACKS

. . . BLACK G.S.
. . . BLACK IV EXTRA

As developed with Developer BON or BONASOL* these new, improved *Amacels* give the finest **developed blacks** obtainable. Perfected through the latest scientific advancements, they offer to a greater degree than ever, better fastness—simplified application—consistent shade purity. Both are suitable for box or jig . . . both are highly dispersed—**practically water soluble**—holding stain on adjacent white viscose to a minimum.

American Aniline was the first successful U. S. producer of dyes designed especially for acetate fibres, and high quality has kept *Amacels* at the top in this field.

For detailed information on *Amacel Black G.S.* and *Amacel Black IV Extra,* as well as special data regarding your own particular requirements, consult our nearest branch. A.A.P. technicians are always happy to be of service.

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*Reg. U. S. Pat. Off.

Courtesy of Bradford Junior College, Bradford, Mass.

She's a great tennis player—

Alice Marble is the only woman to have won the singles, doubles, and mixed doubles in both America and England in one year — 1939. These victories climaxed the amateur tennis career of this courageous athlete who was told in 1934 that she would never play tennis again.

BUT how does she compare with Alice Marble?...In everything we do, we make comparisons . . . In Full-Fashioned Knitting, the one standard for comparison is the 30-section "Reading" Machine with a production of 14 to 16 dozen pairs of superior quality stockings in 8 hours. 51-gauge, 60-gauge.

TEXTILE MACHINE WORKS • READING, PENNA.

Knitting with Dynel

Dynel lends itself exceptionally well to knit goods. Here are some valuable tips for knitting hosiery, underwear, and outerwear with dynel yarn.

Choosing Yarn and Gauge

The proper selection of yarn size and machine gauge is very important for developing the optimum properties of dynel. In order to take advantage of the soft hand, the garment must be knit with a loose stitch. If fine gauge machines are used, the fabric may be too light and sleazy.

Best results have been obtained by using heavier gauge machines and coarser yarns than usual, and knitting loosely. When converting from cotton construction, for example, it is better to use a dynel yarn one or two counts heavier and to knit one or two courses slacker.

Yarn Twist

The normal twist multipliers for cotton or worsted knitting yarns may be used. Twist multipliers in the singles of 3.25 to 3.50 and, in the ply, from 3.00 to 3.25 have been recommended by mills.

Preparing Yarn for Knitting

Paraffin has been found to be a satisfactory lubricant, applied during coning. For best results, the wax should be applied within 48 hours of knitting. otherwise there is a tendency for the wax to "set-up." This phenomenon is more noticeable in summer weather.

Hosiery Knitting

A number of attractive styles have been developed. One style is knit on 84-needle Komet machines and produces a ribbed hose, while the other is knit on a 108-needle Hemphill and produces Argyles. Still another is knit on 200-needle Komets for a rib construction. In the case of the Komet knit socks, the goods are piece dyed, while the Argyles are ingrain knit from package dyed yarn.

Hosiery Finishing

To finish dynel hose, they should be given a thorough extraction for about 30 minutes. They will then appear quite dry when removed from the centrifuge. It is possible to board on standard steam forms, though the temperature must be reduced by cutting the pressure down to between 3 and 5 pounds per square inch and allowing the forms to cool. Another method is to board on a Proctor and Schwartz automatic form, reduce the temperature to 240 F, and use number two speed.

Body Knit Apparel

Circular knit fabrics from dynel on both latch needle and spring needle machines are at present being developed for blouses, dress goods, and children's sleeping garments. Various gauges and yarn sizes are being used, depending upon the end use. Again, it has been found that, when duplicating constructions made from either cotton or worsted yarns, it is desirable to use dynel yarns of a heavier count.

At the present time, the trend seems toward blends of dynel with cotton, wool, rayon, or Vicara in addition to all-dynel goods. Stock blends of 50% dynel and 50% cotton have found good acceptance in children's and men's underwear, where the soft hand and low shrinkage provide customer appeal. Other blends are under development.

Apparel Dyeing and Finishing

The dyeing and finishing of circular knit cloth offers no difficulty. It can be dried either on a Tubetex, a loop dryer, or a pipe dryer. In all cases, the dryer temperature should be kept at approximately 200 F, and then the goods should be put through the dryer a second time at a temperature of 235 to 240 F, for five minutes.

Sweaters (Knit and Finish)

In sweater knitting, it is important that the yarn size be adjusted to the machine gauge and stitch. By obtaining the proper balance, a desirable sweater fabric can be produced in all-dynel and in blends with other fibers.

Sweaters may be knit either from ingrain dyed yarn, or from natural yarn with the goods subsequently piece dyed.

When finished by the normal procedure of blowing steam through the garments, the dynel sweater becomes set and loses the elasticity in its ribbed bottom. Variations of the standard sweater processing techniques are feasible, however.

EXTRA *Knitting News* EXTRA

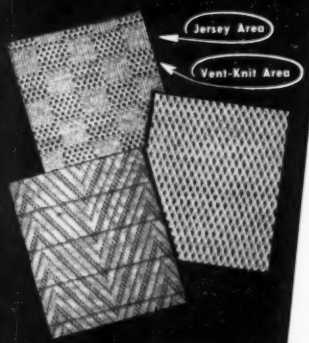
NEWEST! PATENTED! SUPREME LRP KNITS STRIKING, NEW AIR-COOLED FABRICS

The ... Supreme LRP *vent-knit* ... cloth th... unique. It knits patterns ... strong, ... Model ...

LATEST SUPREME DEVELOPMENT — MODEL LRP — PRODUCES

VENT-KNIT

A NEW FABRIC WITH SUPER SALES APPEAL



The Model LRP is the latest member of the Supreme family of high speed, circular jersey and rib knitting machines. Write for information on the entire Supreme line.

Supreme announces an amazing, new summer wear and underwear sales-knitter, the Model LRP.

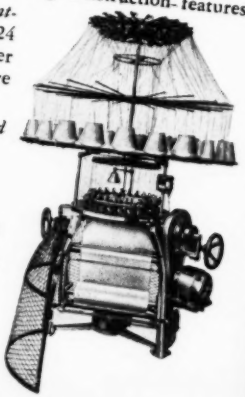
It knits patterns of air . . . produces wonderful, decoratively cool fabrics by placing open-stitched areas in a plain jersey background. These open, *vent-knitted* areas are large, sharply-defined patterns capable of wide variations in design.

The *vent-knit* pattern is a firmly constructed latticework of stitches with scores of openings or air vents to let heat out and coolness in. The breeze-cooled comfort and beautiful effects give the cloth super sales appeal.

Ventilated Yet Full-Bodied, Run Resistant and Shape Retaining—With a unique arrangement of cams, sinkers and pattern wheels the LRP *vent-knits* pattern-cooled cloth that is strong, full bodied, run resistant and lastingly elastic. Combination rayon and cotton or other mixed yarns can be used to produce many startling fabric variations.

Dollar-Reaping Production Rates — The new Supreme LRP pours out a wide variety of *vent-knit* cloth at rates up to 28 yards per hour. The machine has Supreme's mill-proven, trouble-free design and production-boosting construction- features.

The standard Model LRP *Vent-Knit* Machine is 24" diameter—24 Feeds—18 needles per inch. Other diameters and cylinder cuts are available.



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Charlotte, N. C.

SK 146

"The backbone of liberty is the group of small freeholders in any country. The bigger this group of freeholders, the more surely liberty can be maintained and our priceless freedoms protected."

Taxation without Limitation

By RINGGOLD ARDEN

AT THIS season of the year, when the holocaust of Federal taxation has just finished desolating the bank accounts of the citizens, the taxpayer in the upper brackets is likely to be regarding with a heavy heart the ruins of his 1951 accumulation of earnings.

A few months ago a gentleman was remarking that he had liquidated his business for about 40 per cent of its book value because he realized that between the labor unions and the Government, it might soon have no value. He sold it to a competitor who immediately junked it to get the competition out of the way. The competitor bought it with money which would otherwise have gone to the Government as taxes, and he then claimed a capital loss on the liquidation of the business.

The taxpayer, therefore, helped to put up the money for finally wrecking a prosperous business which the unions had begun to undermine. This gentleman made a remark which is worthy of repeating and remembering. He said, "At the end of every year, I realized that the Government had all the cash, and I had the worn-out machinery and the worries."

This is just one of thousands of queer examples of the extraordinary consequences of our confiscatory system of taxation. It is an example which can be approximately duplicated thousands of times in the United States. The owner of property sacrifices it in order to take advantage of some tax loophole which will pay him for losing money.

Several men got quite rich during the last 10 years by accepting textile mills as a gift in order that the owners might get the cash out of the mill treasuries. There were instances reported to us where big mills were sold for the amount of cash in the bank, so that the mill was actually presented to the purchaser in order that the owner might pay taxes on a capital gain instead of on dividends at a fabulously high rate.

The ruinous rate of inheritance taxes and gift taxes makes it almost obligatory for the owner of a small, prosperous business to sell it for cash before he dies. No matter how prosperous the small business may be, this prosperity is largely the result of the personal activities of the owner. At the time of his death the value of the property may begin to drastically depreciate after his guiding hand is removed from its control.

The Government, however, appraises the property at its value at the time of the owner's death, and taxes are assessed accordingly. By the time these taxes are to be paid, there may not be enough money realized from the liquidation of the property to meet them.

Many times, members of the Congress have lamented the rapid and tremendous growth of big corporations through absorbing little concerns, and some efforts have been made to prevent these big companies picking up the little ones. This generous gesture closes the only door of safety to the poor sucker who spent a lifetime building up the little outfit. The only thing he could profitably do with his business is forbidden him.

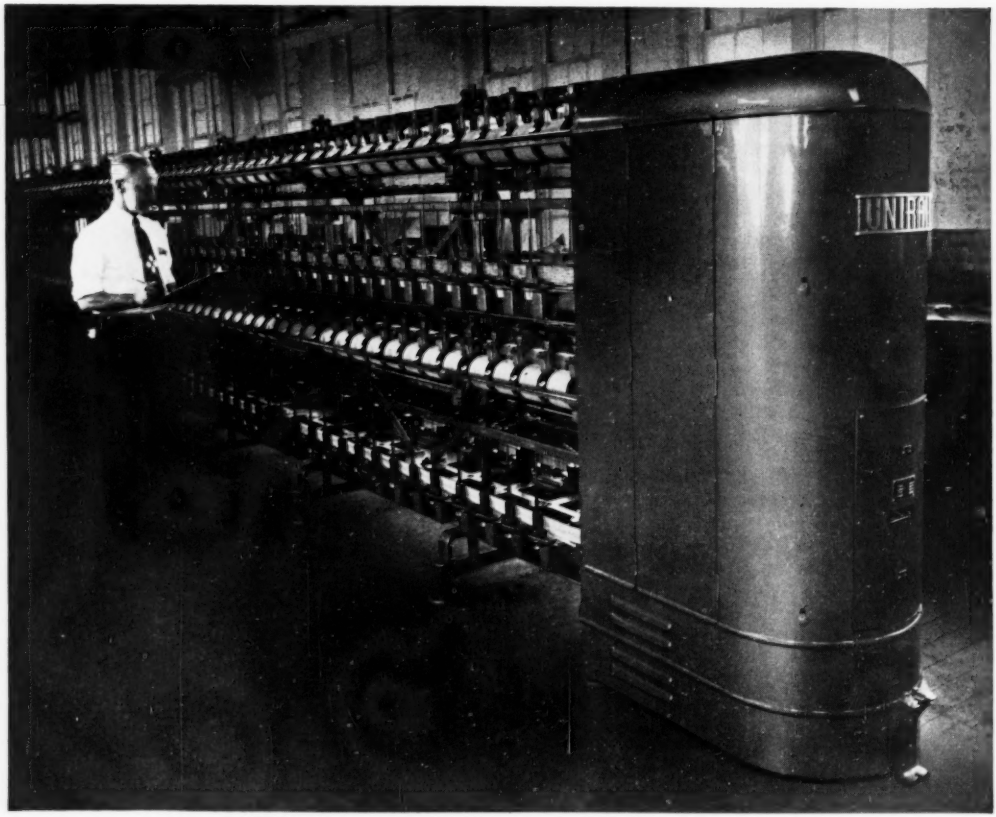
The rapacity of the Government in the matter of taxes is almost unbelievable. If a man has an income of over two hundred thousand dollars a year, the Government taxes the excess at 91 per cent. If the man wishes to give to some relative this pitiful remnant of his income, he must pay a further gift tax.

If the recipient of the gift then dies and bequeaths it to an heir, there is an inheritance tax to pay, and if the decedent happened to be pretty well fixed, the inheriaance tax is at a very stiff rate, which might easily mean that in a case of this sort a man who had earned a million dollars would have $90,000 left after paying his taxes, and if he tried to give this $90,000 away, it would shrink to $78,675, and if this were included in a large estate, the inheritance tax would cut it about in half, so that in a very brief period, a fortune of a million dollars might yield about $950,000 to the Federal Government in confiscations.

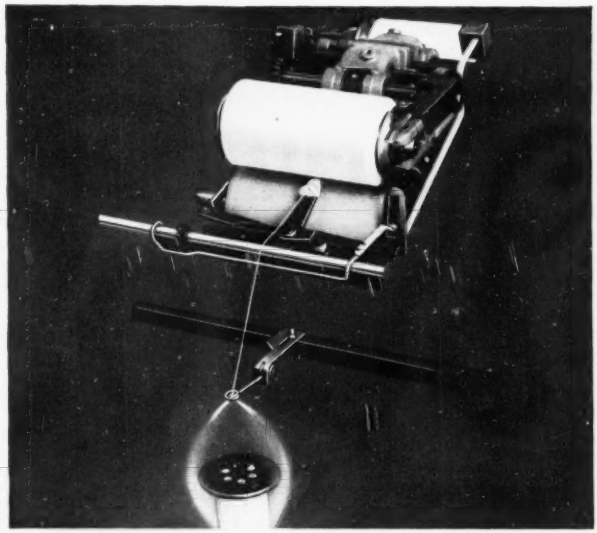
Various state and local govern-

All-New Unirail Uptwister

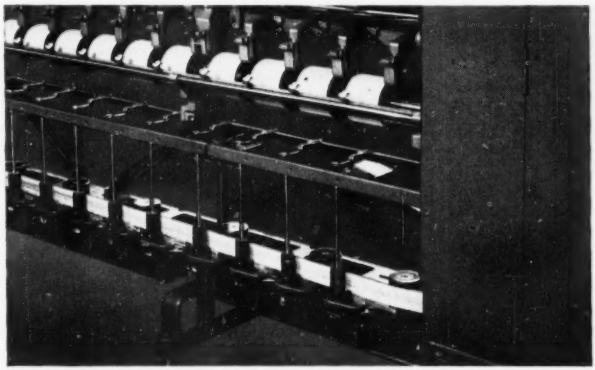
cuts your costs four ways and improves yarn quality



1. PRE-ERECTION AND FACTORY RUN-IN before shipment greatly simplifies the installation of the Unirail Uptwister in your mill. This Standard Bobbin Take-Up Unirail Uptwister — here shown during factory run-in and inspection — comes to you in only three sections. They are ready to operate in a matter of hours. This pre-erection also eliminates the handling and storing of numerous boxes and crates . . . reduces costly supervisory time . . . does away with "missing parts" delays. These savings apply whether you order Straight or Tapered Headless Package, Bobbin Hanger, or Finger Take-Up Unirails.



2. LESS YARN HANDLING leads to more production . . . lower costs and better quality. Straighter thread line from delivery to take-up package plus self-threading guide, quick threading centering eye, simple automatic tailing device and other features cut yarn handling time far below anything you've ever known before. This applies to both Bobbin and Headless Package Take-Up. Further time is saved on the Headless Package Unirail by the automatic tailing device and the entirely new hinged arbor, which guards quality by letting you doff without touching the yarn. Stop motion, too, protects the yarn by lifting the package off the take-up roll when an end-break or runout occurs.



3. LESS MAINTENANCE AND LONGER LIFE result from a combination of unique features. The new Uniflex Spindle, described at the right, requires lubrication only once a year. So do the ball-bearing idlers, which don't have to be removed for lubrication. Yearly lubrication takes care of the take-up shaft bearings and leakproof twist unit. All are designed to eliminate oil dispersion. This reduces lint accumulation. So, you don't have to clean machines so often. Clean machines means clean yarn production at all times. Accurate machining, sturdy cast iron bedplate construction and vibration reduction maintain alignment and retard wear.

4. LOWER POWER COSTS—according to tests under various conditions which showed savings up to 20% and more — result from the superior design features incorporated in the new Unirail Uptwister. Chief among them is the new high-speed Uniflex roller-bearing spindle. There's no other spindle like it. Its flexible lower blade and unique bearing design cut down vibration . . . reduce bearing loads . . . increase spindle life . . . allow safe speeds up to 16,000 RPM under satisfactory conditions.

WRITE FOR BULLETIN 501 which shows you how the entirely new Unirail Uptwister improves yarn quality and package build at higher speeds and lower costs.

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Winding and Twisting Machinery for Natural and Synthetic Yarns

23.1.39

1. Longer bath life
2. Objectionable odors minimized
3. More uniform finishes
4. Better fabric performance

CATALYST AC...

RIGHT START for a FINER FINISH

These are reasons enough why more and more textile finishers are using Catalyst AC in urea and melamine resin applications. First of all, resin baths with Catalyst AC have a far longer life than those containing either diammonium phosphate (DAP) or ammonium chloride, remaining stable for more than two days without artificial refrigeration. The results, of course, are economical plant operations, more uniform finishes.

Another important Catalyst AC *plus* is a marked reduction in the formation of objectionable odors, which often develop in the presence of ammonia salts . . . To these qualities, add improved performance (better washfastness, softer hands) and you will see why Catalyst AC is well worth a trial in *your* plant.

Ask for full information on Catalyst AC today. Write MONSANTO CHEMICAL COMPANY, Textile Chemicals Department, Boston 49, Mass.

Table below shows results of an experiment in which relaxation and wash shrinkages were determined. All resin applications and shrinkage measurements at each level of solids applied were made in parallel. (Relaxation shrinkage is that caused by immersing the loose fabrics in water and wetting agent for 30 minutes at 100°F., hydroextracting, and pressing them dry on a flat bed press. Total shrinkage is relaxation plus the additional shrinkage of an AATCC cotton wash.) Each experimental result shown below is an average of three separate application and washing treatments. **The figures clearly indicate that Catalyst AC is superior to DAP in imparting shrinkage control through U-F resin.**

SHRINKAGE CONTROL WITH CATALYST AC AND DAP

Fabric:	All spun viscose.*
Resin:	Urea formaldehyde.
Application Conditions:	Pad, dry 5 minutes at 180°F., cure 5 minutes at 300°F; parallel applications of catalysts.
Testing Conditions:	Relaxation 30 minutes at 100°F., standard AATCC cotton wash; flat bed pressing.
Data Given:	Sums of % Warp and % Filling shrinkages, i.e. proximate area shrinkages.

% Relaxation Shrinkage*

Untreated Control (Av. of 3)	22.8	
	AC	DAP
10.4% U-F (Av. of 3)	9.8	13.6
16.0% U-F	8.9	12.7
22.2% U-F	6.5	11.7

% Cumulative Shrinkage in 1 Cotton Wash*

Untreated Control (Av. of 3)	37.2	
	AC	DAP
10.4% U-F (Av. of 3)	24.0	27.8
16.0% U-F (Av. of 3)	21.1	27.2
22.2% U-F (Av. of 3)	17.4	23.6

(Catalyst AC: 5% product on U-F solids. DAP: 3% solid on U-F solids.)

*Fabric with excessive shrinkage was purposely chosen to demonstrate a significant difference.

MONSANTO CHEMICALS AND PLASTICS

SERVING INDUSTRY . . . WHICH SERVES MANKIND

Plans for 1952 Gordon Research Conferences on Textiles

The 1952 Gordon Research Conferences, sponsored by the American Association for the Advancement of Science, will be held from June 16 to August 29 at Colby Junior College, New London, New Hampshire. Of special interest to those concerned with textile research will be conferences held the week of July 14.

The Gordon Research Conferences, AAAS, were established to stimulate research in universities, research foundations, and industrial laboratories. This purpose is achieved by an informal type of meeting consisting of the scheduled lectures and free discussion groups. Sufficient time is available to stimulate informal discussions among the members of a Conference. Meetings are held in the morning and in the evening, Monday through Friday, with the exception of Friday evening.

The afternoons are available for recreation, resting, or participation in discussion groups. This type of meeting is a valuable means of disseminating information and ideas which otherwise would not be realized through the normal channels of publication and scientific meetings. In addition, scientists in related fields become acquainted and valuable associations are formed which result in collaboration and cooperative effort between different laboratories.

The purpose of the program is not to review the known fields of chemistry, but primarily to bring experts up to date as to the latest developments, analyze the significance of these developments, and to provoke suggestions as to underlying theories and profitable methods of approach for making new progress. In order to protect individual rights and to promote discussion, it is an established rule of each Conference that all information presented is not to be used without specific authorization of the individual making the contribution, whether in formal presentation or in discussion.

The first meeting of each Conference is held Monday morning at 9 o'clock, Eastern Daylight Saving Time. The morning sessions, through Friday, are scheduled from 9:00 A. M. to 12:00 noon. The second session of each day is held in the evening from 7:30 to 10:00 P. M., Monday through Thursday. There are no Friday evening meetings.

Accommodations are available for a limited number of women to attend each Conference, also for wives who wish to accompany their husbands. All such requests should be made at the time of the request for attendance, because these limited accommodations will be assigned in the order that specific requests are received. Children twelve years of age and older can be accommodated at Colby Junior College.

Rooms are available at several inns and hotels in the area if reservations are made in advance.

Individuals interested in attending the Conference are requested to send in their applications to the director, on or before May 15, 1952. Each applicant must state the institution or company with which he is connected and the type of work in which he is most interested. Attendance at each Conference is limited to 100.

Requests for attendance at the Conferences, or for any additional information, should be addressed to W. George Parks, Director, Department of Chemistry, University of Rhode Island, Kingston, R. I. From June 15 to September 1, 1952, mail should be addressed to Colby Junior College, New London, New Hampshire.

Program for the 1952 Textile Conference, W. J. Hamburger, chairman; J. Edward Lynn, vice-chairman:

July 14. Herman F. Mark. New Polymers for the Formation and Modification of Textile Fibers.

Bruno R. Robers. Influence of Some Colloid Chemical and Physical Factors on Textile Performance of Synthetic Fibers, Especially of the Acrylonitrile Type.

July 15. Kenneth L. Hertel. Response of Fiber Assemblages to Compression as Influenced by Certain Fiber Properties.

A. G. H. Dietz. Transmission and Attenuation of Energy in High Polymers.

July 16. Richard O. Steele. The Relationship Between the Chemical Structure and the Mechanical Behavior of Wool.

Turner Alfrey, Jr. The Relationship Between the Chemical Structure and the Mechanical Behavior of Synthetic Fibers.

July 17. Harold P. Lundgren. Action on Wool of Certain Low Molecular Weight Reagents.

Henry M. Morgan. Effects of Chemical Treatments on the Mechanical Behavior of Human Hair.

July 18. Orville C. Wetmore. The Effects of Various Fabric Types on Body Comfort as Measured by Physiological Responses of Human Subjects.

ments would also be picking the bones of this economic carcass, and the net effect of the whole thing is that the Government has the cash and the man who earned it is picked to the bone. This is not taxation by any reasonable terminology—it is confiscation, pure and simple.

Perhaps the most iniquitous feature of these confiscatory taxes is not the mere robbery of the man who made the money, but the effect that such repressive measures has upon the political and economic structure of the country.

It is now virtually impossible for a small concern to grow to be a large one out of earnings. If the little concern does grow, it must usually be through some stock promotion scheme which leaves the builders and directors of the business at the mercy of any pirate with money who wants to pick up the controlling interest of this expanded business, and kick out the

New Method for Cotton Knit Goods Shrinkage Control

Every step from knitting to cutting the finished garment is involved in a new method for controlling the shrinkage of cotton knitted goods, according to Arthur Reis, Jr., president of Robert Reis & Co. Although details of the process were not made public, it is understood that some new machinery is required.

In addition to the outstanding size-retaining qualities of "Perma-Sized" fabrics, the need for ironing is reported to have also been eliminated.

"This technological accomplishment is the result of lengthy experimentation in our own laboratory and plant [Ford Mfg. Co.] in Waterford, N. Y.," Mr. Reis said.

people who built it.

Practically every big corporation in this country today was built out of plowed-in earnings. The bulk of these earnings now go to the tax collector, and in the case of an individual, the boundless rapacity of the tax laws makes it almost impossible to accumulate honestly any considerable amount of capital.

We have remarked several times that the backbone of liberty is the group of small freeholders in any country. The bigger this group of freeholders, the more surely liberty can be maintained, and our priceless freedoms protected. The small freeholder is literally the only man who is willing to fight actively for his rights. As this army of small freeholders dwindles, the certainty of socialism and communism draws nearer.

When a little handful of corporations will own practically everything of value in the United States, it is as certain as anything can be that the Government will soon take them over and establish the corporate state. There will be nobody left to oppose this.

OUR TAXATION policies, as well as many of our queer New Deal measures, are developing a new type of proletariat in the United States. These people form a tremendous body in which there is no economic interest in anything except the size of the weekly pay check.

The man who has accumulated money and invested in a home or a business or in securities, is not only interested in the size of his pay check, but in the stability of his investments and the money which these investments represent. To him, inflation is an abhorrent thing, because it increases his pay check by robbing him of his capital. To this new proletariat, inflation is a delightful thing, because it increases the pay check by also robbing this other poor chump of his investments.

The American people were very foolish to ever amend the Constitution to give the Congress power of taxation without limitation. Our ancestors separated from England and fought a war with the question of "taxation without representation" as one of their chief grievances. The taxes were not particularly onerous, but they were hated because they were unfairly imposed.

Could anything be more unfair than to permit the representatives of this new proletariat to rob the thrifty accumulators of money and property to benefit those who refused to accumulate? A member of the new proletariat need think little of work and less of thrift. He lives, secure in the belief that the Government will tax his thriftier and more industrious neighbor to take care of him.

The correction for an iniquitious and inequitable situation is the adoption of the proposed constitutional amendment putting a limit on the income tax rate which may be imposed. The Communists and other Socialists, and a great many demagogues, together with a sprinkling of intelligent, but ill-informed persons, have been screaming that this would shackle our Government and make it impossible for it to carry on its business. This is nonsense.

The amount of money actually raised from wealthy people by these confiscatory taxes is pitifully small. The bulk of the Government's revenue is derived from taxing the great horde of small incomes. We have repeatedly hammered away at this subject and can't emphasize it too much. The present tax system is aimed at destroying initiative and cramping the development of new business except as this is developed by the great corporations.

The only remedy is an aroused group of taxpayers, and it is very hard to arouse some of them because so many of them don't know that they are taxpayers. The typical citizen refuses to believe that about 25 to 30 per cent of the cost of everything he buys is taxes. These are largely the hidden sales taxes which the corporations are forced to collect.

In most cases it is silly to talk about taxing a corporation. To the corporation, taxes are merely another item of operating overhead which must be charged off just like insurance or rent or any other normal expense. The tax represents money which must be earned before there are any dividends, and prices have to be set accordingly.

If these corporation taxes were abandoned and the same exact amount of money collected through a sales tax, the people with almost one voice would scream that they were being ruined. They seem willing to pay the taxes so long as these are hidden in the cost of living, and constant wage increases can seem to cover them, although each wage increase without any corresponding increase in production merely raises this cost of living.

The Federal Government puts great faith in these hidden taxes, which not only encourage inflation, but guarantee it. The payroll deduction arrangement for collecting income taxes is tremendously inflationary. The typical worker has no regard for the tax his employer deducts. He and his labor union look entirely at the take-home pay. If the tax is increased, the wages must be increased to maintain the take-home level.

(To be continued)

CALCO dyelines

Advertisement
No. 25 of a series

PREPARED BY AMERICAN Cyanamid COMPANY CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT, Bound Brook, New Jersey
New York · Chicago · Boston · Philadelphia · Charlotte · Providence

Calco

A Brilliant Yellow For Synthetics
CALCOFLUOR* YELLOW HEB

For exceptional brilliance on acetate, nylon and other popular synthetics, Calcofluor Yellow HEB finds wide use. It can be used as a self

shade or—using the normal acetate-dyeing procedure—it can be applied in conjunction with Calcosyn* dyes to produce the unusually bright shades of orange, yellow, scarlet, green or chartreuse now in great demand. When Calcofluor Yellow HEB is used with basic dyes, the two-bath method is recommended, the basic dye being applied in a separate bath either before or after the Calcofluor Yellow HEB.

Calcofluor Yellow HEB has good fastness to washing, perspiration, dry cleaning and crocking when applied to acetate or nylon. Fastness to light in most depths of shades is moderate but compares favorably with most dyes of comparable brilliance.

For Superior Fastness in Wools...
CALCOCHROME* YELLOW CGW 250%

Calcochrome Yellow CGW 250% is one of the fastest chrome yellows available to the wool dyer today. Its outstanding fastness properties have made it a favorite for use in high-quality civilian and army uniform fabrics.

It can be used in dyeing raw stock and yarns by the metachrome procedure and in dyeing raw stock, yarn and piece goods by the top-chrome method.

A glance at these outstanding fastness ratings should be convincing:

	Rating
Light—medium shade	6
Fulling (1½ hours)	
Shade change	4-5
Staining	5
Washing (2 hours alkaline)	
Shade change	4-5
Staining	5
Perspiration	
Acid	5
Alkaline	5
Sea water	5

We said it 15 years ago and it still holds true today:

"Calcodur* Red 8BL is one of the younger members of the Azo family, but for a direct color, it possesses the ultimate in light-fastness, giving a brilliant, full-bodied shade. Calcodur Red 8BL will give you solid, full red shades on all types of union goods. It is extremely soluble and levels well in package dyeing.

When you want real fastness to light, together with easy and economical application, requisition Calcodur Red 8BL."

From a Calco advertisement in the *American Dyestuff Reporter*, August 9, 1937.

*Trade-mark

For the Textile Bookshelf

"Application of Vat Dyes to Piece Goods" by Ormund W. Clark (*Calco Technical Bulletin* 822). A complete review of the development of vat dyes since their introduction to the dyeing industry. The various methods and procedures are fully discussed.

"Microscopical Dyeing Phenomena: Studies with the Microdyeoscope" (*Calco Technical Bulletin No. 825*) by H. E. Millson and L. H. Turl. Reporting on development of new instrument, the microdyeoscope, which permits both visual and photographic observation of dyeing phenomena approximating conditions encountered in usual dyeing processes. Several dyeing studies carried out with the aid of this instrument are described.

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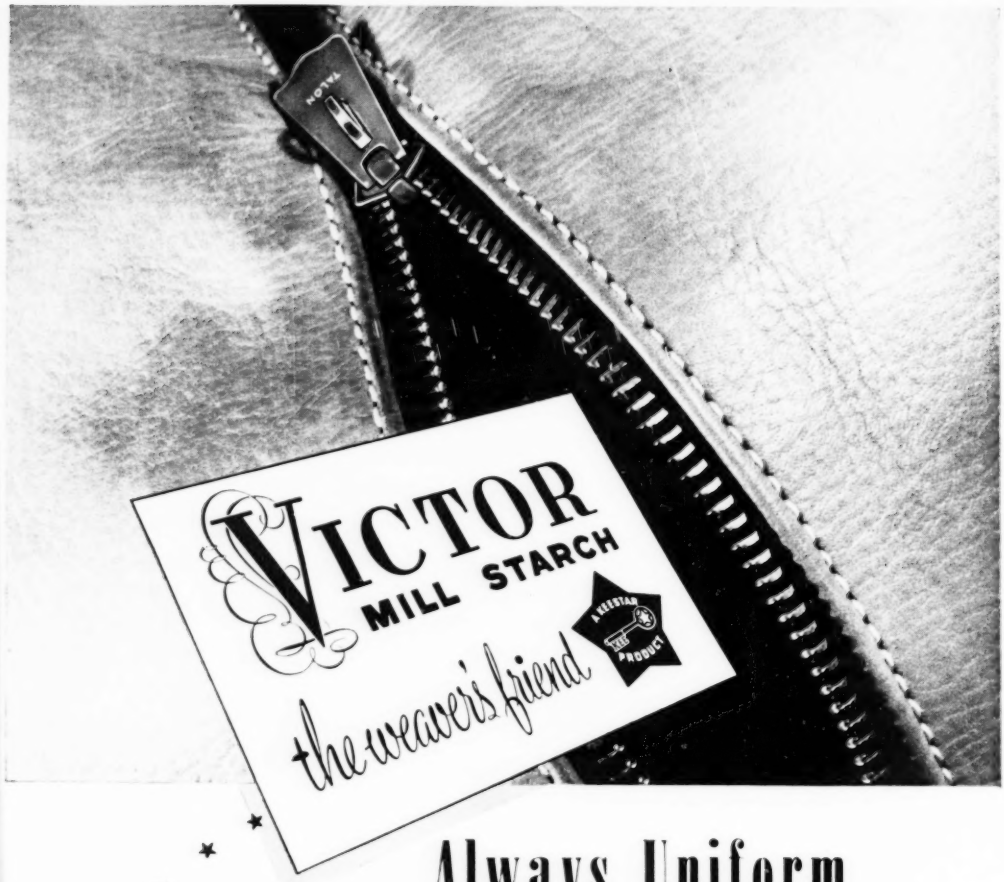
Calconyls*: Here is a one-package product containing stabilized color and naphthosol in the proper proportions for uniform, trouble-free performance. The Calconyls offer simplicity in formulation, reliability and savings in labor costs. A complete line of Calconyl Solutions and Powders available for practically all shades.

In 1951, Calco used nearly 7½ million sheets of paper in its operations. This includes only the lined white paper, letterheads, plain bond, mimeograph and ditto paper.



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There is often no open-and-shut answer to slashing problems. But one thing is basic . . . only unvarying quality such as you get in Victor Mill Starch can insure smooth performance day after day.

That's why Victor is known as "The Weaver's Friend" throughout the industry.

For better penetration, stronger warps, less shedding . . . rely on Victor Mill and the conscientious help of the Keever man who serves you.

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Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

Setting Up Spinners' Job Loads in a Specialty Mill

EDITOR TEXTILE INDUSTRIES:

Usually it is not too much trouble to set up a spinner's job in the average cloth mill where there are only a few numbers and twists run at one time and most of these are standard. In a specialty yarn mill it can be an entirely different story. The yarn mill is interested in making what its customers desire. Cloth mills can run a small number of yarns and vary the construction of their fabrics to get the desired weight.

It is nothing unusual to find many different counts and twists in the spinning rooms of the specialty yarn mill. For example, recently upon checking the production schedule of one such spinning mill, it was found that on 70 frames there were 42 different counts of yarns and twists, varying from 2s hard twist to 16s filling twist. Hardly any of the spinners' jobs contained two frames running the same counts. If the counts were the same, usually the twists were different; this makes it difficult to set up equal job loads for spinners all through the room. It is necessary to do quite a bit of changing to keep such a set-up in balance, and some spinners are badly overloaded. Others may be underloaded and can loaf on the job.

The following system was worked out in an effort to overcome the difficulties and to distribute the job loads among the spinners more equitably. First, a job study was made of each number and twist being produced. The study was made as accurate as possible by trying to catch a spinner with two or more frames with the same counts on them. Over a period of a few months the study was completed, and the number of frames of each count or twist to make up a reasonable job was determined. Among the factors considered were: speed of the frame, type of stock being run, size roving package, and the size of the spinning package produced.

When the number of frames to a job for each count and twist had been figured out, the percentage of a job that one frame amounted to for each count and twist was figured, and the information was listed somewhat as follows:

10s warp twist—10% of a job.
8s soft twist—12% of a job.
16s warp twist—8% of a job.

The information was utilized to establish jobs as follows: Each Monday morning the secondhand or overseer would go over his layout of frames and assign the job to his spinners in such a way that each operator would have a job figuring as close to 100% as possible.

For example, suppose a spinner worked in a part of the room where 8s and 16s usually ran. Then the job would include six frames of 16s warp and four frames of 8s, making 96% of a job. The 96% job would be satisfactory unless the spinner desired a slightly heavier work load; then another frame of 16s would be added to raise the

KINK CONTEST!

15 minutes of your time may be worth $100

This contest ends July 15, 1952.

EVERY kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are received.

The contest rules are simple:

All contributions must be postmarked not later than midnight, July 15, 1952.

A photo or rough sketch will make your entry more valuable, but if you don't have either, send us your kink anyway.

Send your contest entry to: Editor TEXTILE INDUSTRIES, 806 Peachtree Street, N. E., Atlanta 5, Georgia.

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AHCOWET RS*

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For full, quick, level penetration in wetting and rewetting operations, try AHCOWET RS!

AHCOWET RS is extremely adaptable for padding operations and in preparing piece goods for compressive shrinking.

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percentage to 104. The objective of the system is to give each of the spinners as nearly as possible a 100% job. If any odds and ends are left over, they should be given to learners or to some spinner who will be content to run them on an hourly rate rather than on a production basis. Also the efficiency of the job is kept high, and operators are kept happy because they know that jobs are being established on an equitable basis. Jobs can be determined at the beginning of each week and changes can be made all through the week if yarn numbers or twists are altered. CONTRIBUTOR No. 8358

Scouring Woolens Oiled With Good Oleines

EDITOR TEXTILE INDUSTRIES:

The purpose of scouring woolen fabrics in the initial operations of cloth finishing is to remove the oil content and dirt. Successful finishing depends on efficient scouring. The type of scour employed depends on the oil content and the type of cloth. Woolens oiled with good quality* oleines present the least difficulty in scouring, the scouring process being based on the production of soap by action of the soda ash and the oleine.

Close liaison between the carding department and the finishing department is necessary, and the scourer should be notified of any changes in oils used in that he may have to change his scour. It is never advisable to make major changes in scouring without first observing the effect which one change makes, otherwise it may be difficult to assess the effect of any one particular alteration.

The two-stage scour is recommended by the writer. The first stage gets rid of much of the dirt and oil and makes scouring conditions better. The amount of liquor to use in the bath is a debatable point, but a 1:1 ratio should be adequate to wet out a woolen cloth. Woolen cloths, in other words, hold roughly their own weight of water. Any excess liquor forms the pool in the bottom of the machine. More dirt will be held in the cloth if a small pool is employed; therefore it is not desirable to scour with a small pool. The tendency, if this is done, may be towards uneven scours. The two-stage scour is preferred because there is less risk of the emulsion cracking.

When scouring woolens oiled with a good oleine, 6 degrees Tw soda ash solution is used. 20-25 gallons at 90 F per 100 lb of cloth is a typical formula. Some operators advocate temperatures above 90 F. This may be possible with some cloths but if there is any danger of color bleeding, the temperature suggested is better. Below this figure the scour is not so efficient. After 10 minutes average running time, the liquor should be run off. If this time is exceeded there may not be enough soap left for the second scour. Washing-off should not be done between Stage 1 and Stage 2. Stage 2 consists of running for 20 minutes in 10-15 gallons of soda ash solution (6 degrees Tw. at 90 degrees F) per 100 lb of cloth.

At this point the liquor should be warmed up by doubling the

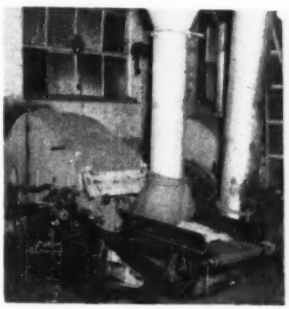
*Free fatty acid content of not less than 70%.

Every Bit Helps

WHAT TO DO with bits from the first line of rag pickers? Perhaps Charlton Woolen Company of Charlton City, Mass., and those two vertical pipes shown in the photograph provide the answer.

Charlton installed a blower system that evacuates bit ends from beneath the cylinders of each of their eight clip pickers and lumper. Bits are blown through conduits to a condenser and then back to the feed aprons of pickers where they combine with fresh clips entering the feed rolls. Baffles in the main return conduit distribute bits evenly to each picker.

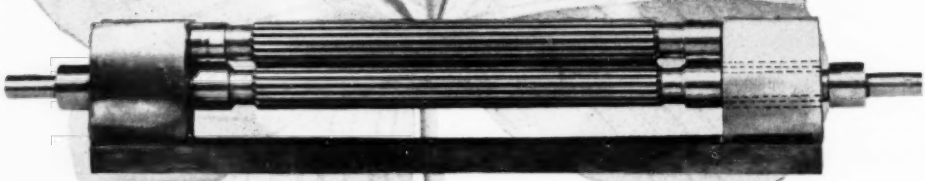
The left duct in the photograph returns the bits. Notice the cloth skirt fastened on the end of this pipe. It cuts down turbulence on the apron by braking air velocity. Bits emerge gently. The other pipe



shown evacuates bits as they drop from the picker's cylinder lags, and leads to a central condenser where stock from the other machines joins.

A third duct located behind the machine, not shown, serves as a conduit for blowing picked clips to a condenser which feeds the lumper.

You're Lucky if Your Old Drawing Rolls Are Wearing Out



Ideal High Speed Ball Bearing Drawing Rolls*

Lucky because you can order Ideal Drawing Rolls as replacement parts and get almost twice as much production per frame, save on operating costs, and produce better quality yarn. Accurate records kept on hundreds of Ideal roll units prove this beyond question. Ideal ball bearing spacing units prevent wear, misalignment, and unequal tension between rolls. They permit continuous high speeds which were formerly considered impractical.

On Ideal units the weight is carried on the spacing unit housings instead of on roll necks and the shaft runs freely on ball bearings. This cuts power consumption way down and assures smooth, quiet action at any speed.

Ideal fluted sections are 10½ inches wide to operate with the conventional 6 to 10 ends up at back, or from laps 18 ends up, and can take 9 inch laps direct. They are hardened and ground for better crimping action and to prevent nicking, burring, lap-ups, and work stoppages.

Ideal High Speed Ball Bearing Drawing Rolls are far superior to anything else you ever used. Investigate their great advantages before you replace your next worn drawing rolls.

Ideal Industries, Inc.
Bessemer City, N. C.

* Patented

quantity of liquor in the beck with water at 110 F. This brings the temperature back to 90 F. Then run for approximately 5 minutes. Observation of the scouring liquor, in instances where the soap is made with the oleine in the piece and the soda ash, shows how effective the scour is. After running about 20 minutes, the scour looks somewhat inactive, and that is the time to warm it up. The effect is to create a more active looking scour and improve conditions for washing off.

Washing-off is usually performed at 100-110 F until the piece is clean, which may take 20 minutes if flushing and squeezing are employed. Some scourers have adopted the method of simply opening up and allowing the piece to run for ¾-hour with spray pipes operating. This method is much simpler but is not efficient and does not remove the same amount of residual soap as the former method. Plenty of water should be used, and the holes in the spray pipe should be adequate for the purpose. Any residual soap is evenly distributed by squeezing the goods. Cooling down is then performed; this may take 5 minutes.

Pieces which are not adequately scoured may show up in Hoffman pressing or blowing. Where dyeing is to follow, it is desirable to allow 5 to 10 minutes extra time in washing-off. If the pieces are not adequately scoured, irregular dyeing may result. Special measures are required with poor quality oleines or in pieces where the wool has been oiled with blended mineral oil. Mineral oil is difficult to remove. The emulsifier used with mineral oil is usually

Improvised Roving Bobbin Stripper

This item was submitted in a kink contest.

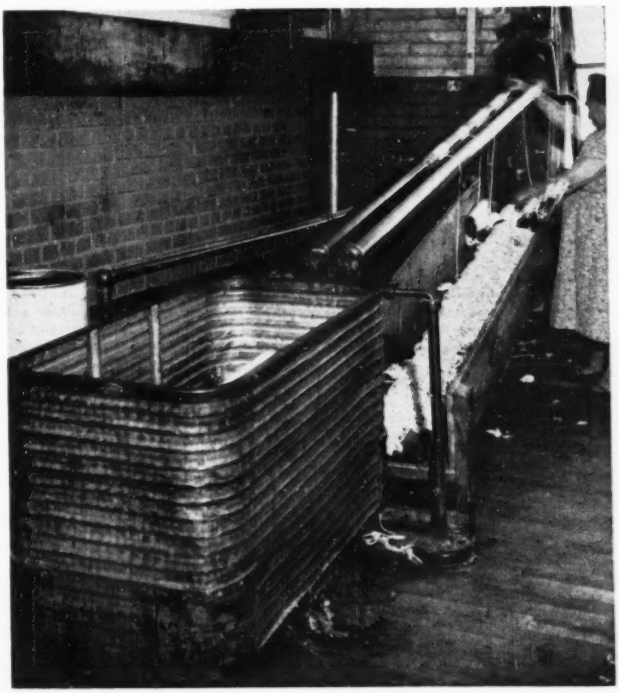
EDITOR TEXTILE INDUSTRIES:

We employ a set of parallel rolls approximately seven feet in length to remove tailings of roving from bobbins. The rolls are set in an inclined position by means of hinged bearing supports, and empty bobbins are discharged into a roving box at the lower end of the incline. The inclined rolls are driven by an electric motor (see accompanying illustration).

In use, the operator places a bobbin between the two rolls at the upper end of the incline. She then grasps the loose end of roving and lays it over the roll nearest her. As the bobbin revolves in contact with the rolls, the remaining roving is unwound and is permitted to fall into a trough immediately under the rolls. At the same time, the revolving bobbin travels slowly toward the lower end of the rolls and falls into the box provided for empty bobbins.

Use of the bobbin stripper has speeded the cleaning operation considerably in that the operator is not required to remove the empty bobbins and place them in a box. There is also an appreciable increase in the life of roving bobbins. Bobbin damage, incidental to cutting with a knife and throwing or dumping empty bobbins into a container, is eliminated.

CONTRIBUTOR NO. 8461



NEED A BETTER RESIN FINISH?

Probably a *Mixture* of Resins Is the Answer!

If you are not completely satisfied with the finish you are getting from the resins you are now using, it will be well worth your while to ask the Onyx Laboratory to work out a suitable combination of Onyx Resin Finishes to meet your requirements.

XYNO RESIN

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cover a wide range of thermoplastic and thermosetting resins. They are available in the form of water solutions as well as dispersions. They are provided in varying viscosities and particle size, in order to give, when used alone, specific hands and stiffening effects. Various degrees of durability of finish can be obtained.

However, we have worked out many combinations of these Xyno Resins to meet definite finishing requirements, for a number of popular constructions, which have been highly satisfactory from every viewpoint. The fact that the Xyno Resins are usually compatible with each other and that they require no curing, makes possible a very wide range of "tailor-made" resin finishes to meet specific needs.

Tell us the results you need, and let us work out the combination of Xyno Resins that will give you what you want.

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alkali sensitive, and synthetic detergents are commonly used. The use of hard water, which may lead to the formation of lime soaps, may also be troublesome. Slipe wools may also lead to similar troubles, and small quantities of impurities may be removed by the addition of water conditioner at the rate of ½ lb per 100 lb of cloth.

Scourers are often accused of creating poor "hand" in woolen pieces. If the alkali is not excessively strong, the hand of the fabric should not be impaired. Alkali browning is possible if too much alkali is used, and this is particularly noticeable where contrasting colors occur in the cloth. Even in certain gray shades the bloom may be lost if alkali yellowing occurs.

If the pieces are white or gray it is advisable to neutralize any residual alkali with formic or glacial acetic acid. These acids are volatile, are dispersed on the tenter, and cause no ill effect. One pint of 80 per cent formic or glacial acetic acid to every 250 lb of cloth is a suitable amount to add. The strength of the chemical in the machine is 0.25% and is effective in neutralizing any excessive alkali absorbed in the piece.

Washing-off for three minutes may be done, following the neutralization process. Neutralization of the alkali is also desirable from the point of view of having wet pieces lying about. They are less susceptible to color bleeding due to alkali migration and also less likely to be attacked by bacteria.

Particular emphasis is placed on the cooling-off process. The combination of heat, moisture, and weight of the piece (if cooling-off is not allowed) may cause "color bleeding" and the resultant bad effects.

CONTRIBUTOR No. 8451
[*Foreign*]

Discussion on Full-Fashioned Seaming

EDITOR TEXTILE INDUSTRIES:

I am working on a job analysis of seaming full-fashioned hosiery and would be very grateful to you for such help as you may be able and willing to give me along the lines of the questions listed below:

1. Have you any literature that describes the seaming operation from the point of view of the best methods and motions to use, the inter-relationship of the various simultaneous motions required on the job, and the special problems involved in training new employees for this operation?

2. I would like to ask your opinion as to the relative merits of two methods of seaming, which I will refer to as "A" and "B".

A. Operator sits facing the machine table straight on. Machine is set squarely on table. Operator passes work straight from right to left, in a line parallel to the front edge of the machine table.

B. Operator sits at an angle to the machine table. Machine is also set at an angle on the table, such that the operator feeds the stockings almost directly away from her into the machine (she "drives" the stocking, as it were, into the machine).

Regarding the two different methods of seaming, I should like to ask the following questions:

1. Does either method, when used by competent personnel, produce work of superior quality to the other method?

2. Which method will give, for the same quality of work, the highest production per hour?

3. What would be, for operators working at 100% High Task (80 B's on a Bedeaux Type Plan or 133⅓% on Standard Hour Plan) the average production per hour (8-hour day) for the following constructions, not conditioned before seaming?

Gauge	Leg Den.	Welt Den.	Spliceing and Toe Denier	Courses per Inch In Leg
60	15	40	30	44
51	15	40	30	46
51	30	60	40	40
45	30	60	40	46
45	15	40	30	44

4. Are there any special advantages of one method over the other, outside of quality and volume of work produced?

5. Is either method harder to teach or does it require longer to learn?

6. If retraining from one method to another (say from A to B) were undertaken, would this retraining require much time per operator? How could such retraining best be undertaken?

I would also appreciate receiving stitch construction diagrams, machine construction diagrams, and machine operating booklets.

CONTRIBUTOR No. 8457

◆

EDITOR TEXTILE INDUSTRIES:

We have 50 seamers, and only seven machines are set at right angles (straight) on the tables. New seaming machines have been installed from time to time to replace the older models. The seven machines in the straight position are driven by lineshaft and are to be replaced; otherwise they would be changed to the oblique position. A majority of our operators like to have the machines arranged in an oblique position.

If an operator is trained to seam on machines arranged at an angle on the table and then changed to a machine set straight on the table, production drops about 10 dozen in eight hours for the first three or four days; however production increases to normal in about two weeks.

A few years ago all of our machines were set straight. Then we started replacing the older models

with new machines set at an angle. At first, operators on the new machines showed a decrease of 10 dozen per eight hours. Production soon returned to normal after the operators became accustomed to the new position.

Our operators claim that it is easier, not as tiring, and a more comfortable position to work with the machines set at an angle. We make such a variety of different styles that it is difficult to check production per operator on one style in determining exact figures.

CONTRIBUTOR No. 8459

◆

EDITOR TEXTILE INDUSTRIES:

In answer to the question posed by CONTRIBUTOR No. 8457, I should like to point out that we have used seamers in both oblique and right-angle positions, and we are at present employing both arrangements. Our operators are allowed to adopt any reasonable posture and position of machine which seems best suited to their needs to obtain satisfactory production.

Although we have not analyzed production data solely from the standpoint of technique and the effect of machine position, we have checked our records sufficiently to determine that there is no significant difference among our best seamer operatives, despite the fact that different techniques are employed by them. Also, upon checking further we found that trained and experienced operatives showed no appreciable difference in production as compared to relatively new seamers who have been allowed to find their own "best way" without any formal training period. Our seamers are paid on a piece rate basis which makes a production check simple.

In contrast with some other full-fashioned mills, we place emphasis on quality and no rejects; therefore maximum production is a factor which does not influence the seamers except in a minor way.

CONTRIBUTOR No. 8460

Reader Wants Additional Discussion on Unevenness

EDITOR TEXTILE INDUSTRIES:

Although there have been several discussions on the subject of evenness in the various processes of yarn preparation in recent issues of TEXTILE INDUSTRIES, we would like to see more of these discussions in HOW OTHER MEN MANAGE. In our mill we make heavy yarns (6s to 13s), and doubling has been reduced to a minimum. Where we formerly had four doublings on the pickers, two processes of drawing with six doublings each, and two processes of roving (one with two doublings) —288 doublings in all; we now have only six to eight doublings, all on one process of drawing.

We have done quite a lot of work on our pickers. After complete overhauling, a pneumatic pressure system was installed, and a device for oiling the lap pin was applied. We have gone to a lot of trouble and expense to improve the method of feeding pickers. Several changes were made, including the installation of blending feeders in the opening room and a system for feeding the reworked white waste as evenly as possible.

Despite the changes, our picker laps are not as even as we think they should be, especially at the beginning of the lap where we frequently have one, two, and three heavy yards. Sometimes we find both heavy and light yards within the lap.

Our cards have received a lot of attention. New clothing is applied when necessary, bad screens are replaced, and careful attention is given to settings, work on coiler heads, etc.

Although our drawing frames are old, one-yard weighings of the drawing sliver show a very low coefficient of variation. The linear regularity, as measured on the Saco-Lowell graphic sliver tester, is not so good.

For our coarse yarns we make a .60-hank slubber roving on old reconditioned frames. Some of our frames are equipped with conventional three-roll draft, and some are equipped with Casablanca long draft. We reel six-yard weighings and get what we think is a very good coefficient of variation. The Belger chart is even, although it is definitely on the "hard" side.

Spinning is done on frames with Casablanca long draft. Our yarn variation, on both size and break, is far from satisfactory. To obtain the variation, we have selected two of our predominant yarn numbers and on these counts we take 20 bobbins each, reel the regular 120-yard skeins, plot the breaks and sizings each day, and calculate the standard deviation and coefficient of variation at the end of the week.

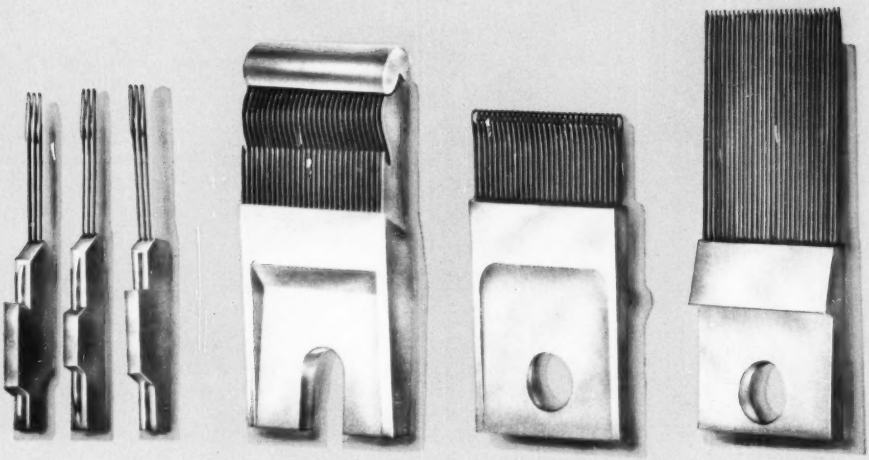
We use a break draft of 1.49 and have experimented to some extent with other break drafts, but we do not seem to get the desired results. There is some disagreement among our key men as to the effect of spinning on our variation. Yarn wound on black boards shows some thick and thin places; therefore I must agree with those who insist that spinning *does* play a part in producing unevenness.

Despite the unevenness of our yarn, the breaking strength remains comparatively high, perhaps due to the good cotton that we are getting at this time.

I believe that other readers of HOW OTHER MEN MANAGE would be glad to see an extended discussion of this subject from every angle, and doubtless some have had experiences which would throw much light on the question of unevenness.

CONTRIBUTOR No. 8446

For Tricot Knitters . . .



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Torrington's recently announced needle-leading service now includes a complete line of leaded needles, sinkers, guides and sley points to meet all demands of Tricot machine users for prompt, dependable service on high-quality leaded units.

Manufacturers of Tricot fabrics may now secure Torrington quality for every phase of their needle requirements. Your nearby Torrington representative will give you full details on how this new service can benefit your mill operation.

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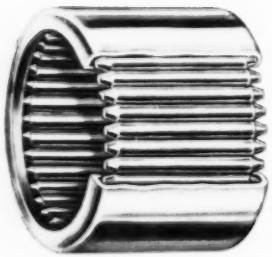
easy mounting...



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You can forget about spacers, retainers and positioning shoulders, too. They are not needed with Needle Bearings. A straight bore, of proper size, serves as the housing. Thus, design is simplified and machining time is saved.

Would you like to know more about Torrington Needle Bearings in terms of your own anti-friction requirements? Our engineering department will be glad to help.

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Needle • Spherical Roller • Tapered Roller • Straight Roller • Ball • Needle Rollers

Ultrasonic Viscometer

(*Continued from page 85*)

switching units permit an operator to switch in any probe desired and read viscosity directly on the indicating meter.

Rich-Roth Laboratories, 673 Connecticut Blvd., East Hartford 8, Conn.

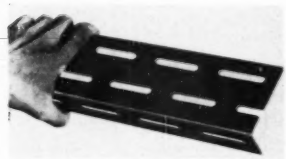
For additional data, request item E-101, using business reply card on page 220.

NEW Equipment AND MATERIALS

Other items are described on pages 83 and 85

Steel Angle Designed for All-Purpose Fabrication

DexAngle—a 10-ft long, 3"x 1.5"x .080" slotted-leg galvanized steel angle designed for all-purpose industrial fabrication—is available in limited quantities. The lengthwise rows of slots in this unit permit rapid assembly by bolting of shelving, bins, scaffolding, ladders, assembly tables, coat and hat racks, partitions, benches, machine guards, hand rails, and many other plant equipment items.



DexAngle (Acme Steel).

Hacksaw and wrench are only tools needed for assembly. Diamond-shaped indentations spaced at 3-in. intervals along full length of angle make cutting a simple operation. Slots are automatically in alignment for bolting when pieces are cut along these indentations.

Sold by package, each containing ten 10-foot lengths of angle and 75 nuts and bolts. Shelving panels (36" x 6" with 1" flange) are available in packages of 12, with 24 nuts and bolts.

Acme Steel Co., 2840 Archer Ave., Chicago 8, Ill. (E-206).

Non-Chemical Water Treatment Process and Equipment

A water treatment process and equipment called "Hydrotron" eliminate scale in heat exchange equipment by changing water electrophysically, so that minerals contained in the water crystallize in the form of a sludge or slurry and do not form a dense hard coating over heat exchange surfaces. The sludge formed can be removed by the usual methods of blowdown. The process is suitable for treatment of fresh water or salt water.

Heller Laboratories, 196 Morgan Street, Jersey City 2, N. J. (E-317).

Picker Pulverizes Hard Wool Tags

A picker that is said to be most effective in the preparation of wool tags for scouring is the Model "E" Special shown in the accompanying photo. Little breakage or loss of fiber is experienced, even when pulverizing and combing out the hardest of tags, it is reported.

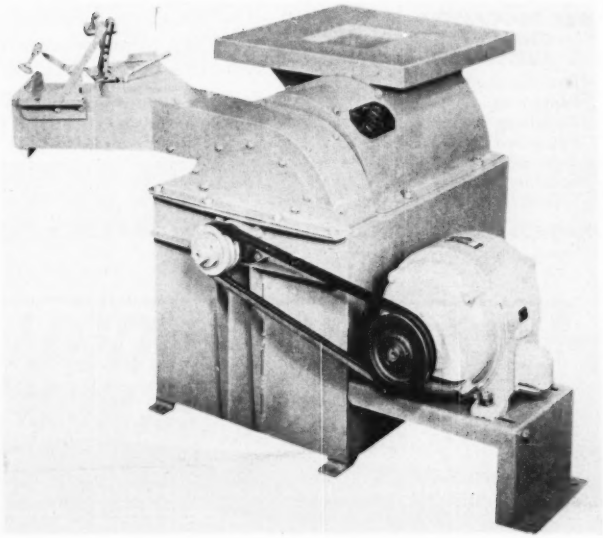
The machine also handles all types of cotton stock from comber strips to cotton linters and kapok; it will refluff cocoanut fiber and picked hair, the manufacturer claims. A patented feature makes possible the handling of all of these fibers without any change in the machine.

Unit comes completely equipped with 5-hp totally enclosed motor, motor mounting, V-belt drive, and "Y" spout.

Mudrick Machine Works, 3780 So. Main St., Los Angeles 7, Calif.

For additional data, request item E-103, using business reply card on page 220.

Model "E" Special picker for wool rags (Mudrick).



New Softening Agent for Cotton, Rayon, Acetate, Nylon

Syntho-Softener C, described as a substantive product in the form of a highly concentrated white paste, is the latest development in the Syntho-Softener series of softening agents.

According to the manufacturer, it

"I WOULD LIKE TO INTRODUCE YOU TO MY NEW ASSISTANT. WHEN HE COMES DOWN."

SEYCO Products

WARP SIZING
- Softeners
- Binders
- Penetrants
- Ty-In Penetrants
- Shuttle Dressing

WET PROCESSING CHEMICALS AND AUXILIARIES
- Dye Assistants
- Penetrants
- Rewetting Agents
- Sanforized Fabric Oils
- Detergents
- Scouring Agents
- Softeners

NIAGARA TWIST-SETTER
- Yarn Conditioning Penetrants

We'd like to introduce you to a lot of new SEYCO Textile Assistants our research lab is working on.

Some of them may not pull thru our rigid testing methods—but you may be sure that those which do will be well worth knowing.

Do you have problems? Call the SEYCO man.

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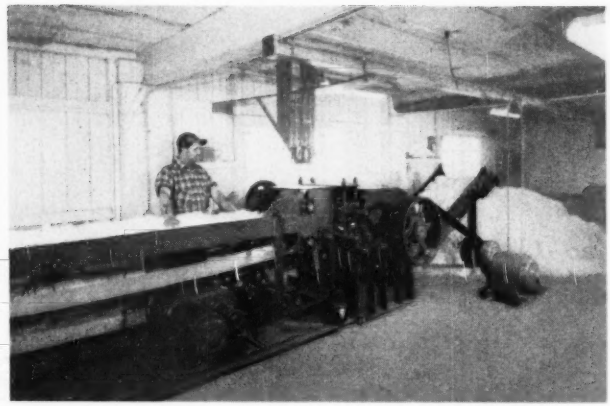
SEYCO

PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS • TWIST SETTER MACHINES •



New machine for cutting thread wastes (Taylor, Stiles).

assures a durable, soft, full, mellow hand with maximum draping qualities for all types of cotton, rayon, acetate, linen, and nylon fabrics. It may be used on whites with no yellowing and particularly on colored goods since it does not affect the color or light fastness of dyed goods or prints.

The softening agent will not cause mark-offs, odors, or rancidity, the manufacturer states; it is applied in the usual way in the pad, jig, dyebeck, or quetsch; shows no discoloration on pressing or ageing of the goods; and will exhaust in long baths to give economical application.

Hart Products Corp., 1440 Broadway, New York 18, N. Y.

For additional data, request item E-109, using business reply card on page 220.

Better Cutting of Thread Waste with New Machine

A machine to meet the problems of cutting the new synthetics and other thread wastes was recently announced. Among its features is a 24" revolving knife cylinder that mounts two knives at opposite sides, permitting uncut material to pass freely without jamming—when cuttings are long, material does not tend to blow back away from the knives.

A long feed roll, with bearings entirely outside the guide box and with ends shaped to guide the fibers toward the center of the cutting element, also tends to "position" the fibers correctly for cutting and to prevent any winding of fibers around the feed roll bearings.

The feed apron is raised so that the force of gravity helps to guide the fibers from the feed rolls to the cutting edge of the bed knife.

By simple adjustment of relative speeds of cutting cylinder and feed, any desired length of cutting can be secured and maintained. The cutting is by shearing action, the manufacturer states, assuring clean, even results.

Taylor, Stiles & Company, Riegelsville, N. J.

For additional data, request item E-107, using business reply card on page 220.

Needle-Leading Service for Raschel and Tricot Knitters

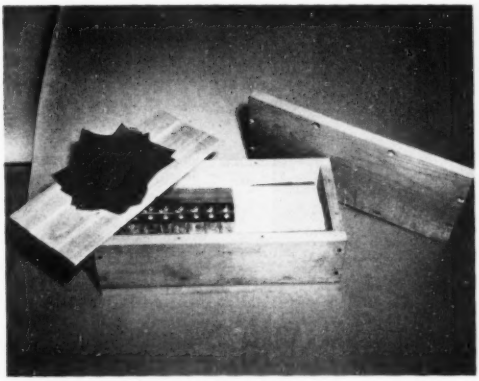
A needle-leading service for users of both raschel and tricot machines has been announced by The Torrington Company.

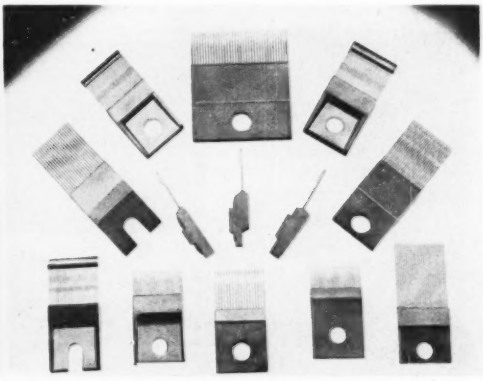
Complete leading, recasting, and reneedling services are reported to be now in full operation for users of raschel machines, and similar services for tricot mills are now being placed in full scale operation as rapidly as the demand requires.

A full line of parts, as well as both latch and spring beard needles, will be supplied with precision cast lead bases, including thread guides, sinkers, sley points, stitch combs, etc.

An important phase cited for this service is the procedure followed in

REPRESENTATIVE LEADED PARTS produced by Torrington's new needle leading division are shown in the right photo. Left, specially designed case used to safeguard needles in transit.





MITCHELL-BISSELL "Blue Satin Finish" PORCELAIN GUIDES

Only by specifying the complete name . . . Mitchell-Bissell "Blue Satin Finish" Porcelain Guides . . . can you be sure of getting the *genuine wear-resistant finish* that makes these guides so superior in service and economy.

"Blue Satin Finish" (Reg. U. S. Pat. Office) was originated by us in 1936, providing a surface *much more resistant to thread wear* than is available on any other porcelain guide. The blue color was adopted simply as a means of identification of the product. However, it is not the color, but the *type and quality of this finish* that counts.

Unless it is made by Mitchell-Bissell, a "blue" guide does not necessarily signify longer wear.

Mitchell-Bissell "Blue Satin Finish" Porcelain Guides are available in thousands of standard shapes, or made to your specifications. Write for samples and prices

MITCHELL-BISSELL CO., TRENTON, N. J.

Southern Representative: R. E. L. Holt, Jr. & Associates, Greensboro, N. C.

recasting operations on latch needles. Used leads are melted down and the used needles removed for careful individual inspection. All worn or damaged needles are sorted out for return to the customer, while all those needles found in good condition and giving promise of sufficiently long service life are grouped together and remounted for re-use. All leaded units are individually mounted in specially constructed shipping containers so that they are fully protected from damage during transit.

The Torrington Co., Torrington, Conn.

For additional data, request item E-110, using business reply card on page 220.

Double Protection for Knitting Machines

A device now on the market is designed to stop a knitting machine even though the primary supply current for its stop motions should fail for any reason.

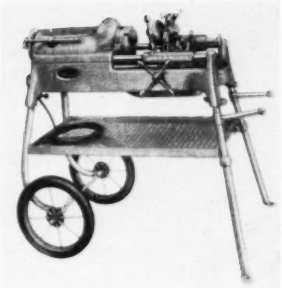
Known as the "Safety Controller," it is described as a double-action device—it "knocks-off" with current "on" or "off," preventing smash-ups and needle breakage.

The controller incorporates a holding coil and a relay coil. With supply current "on," the holding coil energizes the armature and allows the mechanism to stay in "loaded" position. If supply current fails, the holding coil becomes de-energized and releases the armature which in turn allows the mechanism to kick-off. With the controller in "loaded" position and stop motion contact made, the relay coil becomes energized and breaks a set of contact points which de-energizes the holding coil, resulting in the kick-off action mentioned above.

These safety controllers are made in three types: swivel, push-pull, and midget. With various bracket arrangements these three types can be adapted to any make or type of knitting machine. All are compact and fully enclosed in suitable housings. They are made to external size specifications to adapt them for replacement on any machine where the non-safety controller is now used. It is pointed out that these safety controllers are designed for use with a transformer for 50 - 60 cycle a-c primary current.

Stop-Motion Devices Corp., 1471-77 Fulton St., Brooklyn 16, N. Y.

For additional data, request item E-106, using business reply card on page 220.



Ridgid "500" pipe and bolt threading machine (Ridge Tool).

Pipe and Bolt Threading Machine

Outstanding feature of the Ridgid "500" pipe and bolt threading machine is a new type of self-contained die head which reduces first cost and saves work and time, according to the manufacturer. The die heads are instantly adjustable. The machine comes in bench and stand models, latter open or closed, with or without wheels.

The Ridge Tool Company, Elyria, Ohio (E-316).

All-Purpose Guide for Universal No. 50 Winders

An all-purpose A1SiMag 192 button guide for Universal No. 50 cone winders is reported to provide the following advantages:

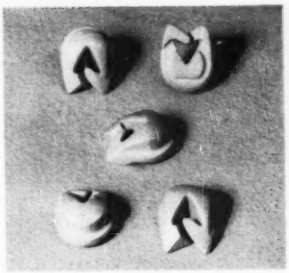
(1) It is easily threaded.

(2) Yarn will not jump out.

(3) An exact delivery point is provided.

(4) It winds large or small packages, tapered or straight.

NEW Equipment AND MATERIALS



Button guides for Universal No. 50 winders (American Lava).

(5) Long life and low cost.

Guides are stocked by Universal Winding Co., Providence, R. I., for immediate delivery under Universal No. 73-167-49. They may also be ordered from American Lava under their No. GS-25534. Test samples are free on request to American Lava.

American Lava Corp., Chattanooga 5, Tenn.

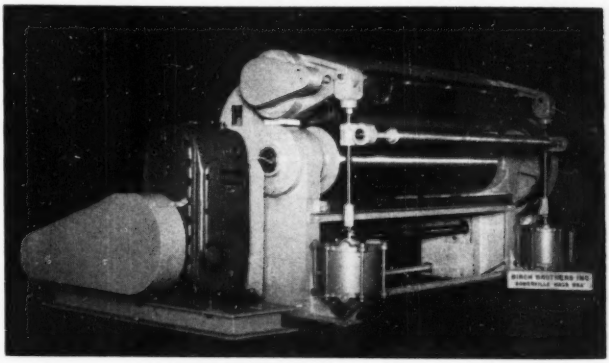
For additional data, request item E-114, using business reply card on page 220.

Heavy Squeeze Roll Unit for Fabrics Up to 50"

A heavy squeeze roll unit now available for fabric up to 50" face may also be used for padding, the manufacturer reports.

It is fitted with a rubber-covered top roll and a stainless steel bottom roll, both of which are mounted in

Birch Brothers' heavy squeeze roll unit for fabrics up to 50".



The better the valve, the less it will require maintenance
With Powell, it's not "how many" but "how good." Powell Valves are so good that they operate most efficiently, last much longer, and require far less maintenance. In short, Powell can give you flow control at its best.
There's a greater variety of Powell valves in use today than of any other individual make.
The Wm. Powell Company
Cincinnati 22, Ohio
Fig. 375—200-pound Bronze Gate Valve with renewable, wear-resisting "Powellium" nickel-bronze disc.
POWELL
BRONZE, IRON, STEEL AND CORROSION-RESISTING VALVES
DEPENDABLE VALVES
SINCE 1846

self-aligning spherical roller bearings. Pressure (1 to 15 tons) is applied by air cylinders with individual pressure controls for each cylinder.

Drive is from a motor through a variable speed unit. Machine is said to be exceptionally rugged. Rolls do not have to be crowned.

Birch Brothers, Inc., 32 Kent St., Somerville, Mass.

For additional data, request item E-113, using business reply card on page 220.

Self-Priming Centrifugal Pumps

Three larger size pumps—namely the 20M, 30M, and 40M—have been added to a line of self-priming centrifugal pumps. These pumps conform to the standard of the Contractors Pump Bureau of the Associated General Contractors of America and are powered with air-cooled gasoline engines. The new sizes are available mounted on skids, on two pneumatic-tired wheels, or on steel wheels.

Rice Pump & Machine Co., North Milwaukee Street, Grafton, Wis. (E-322).

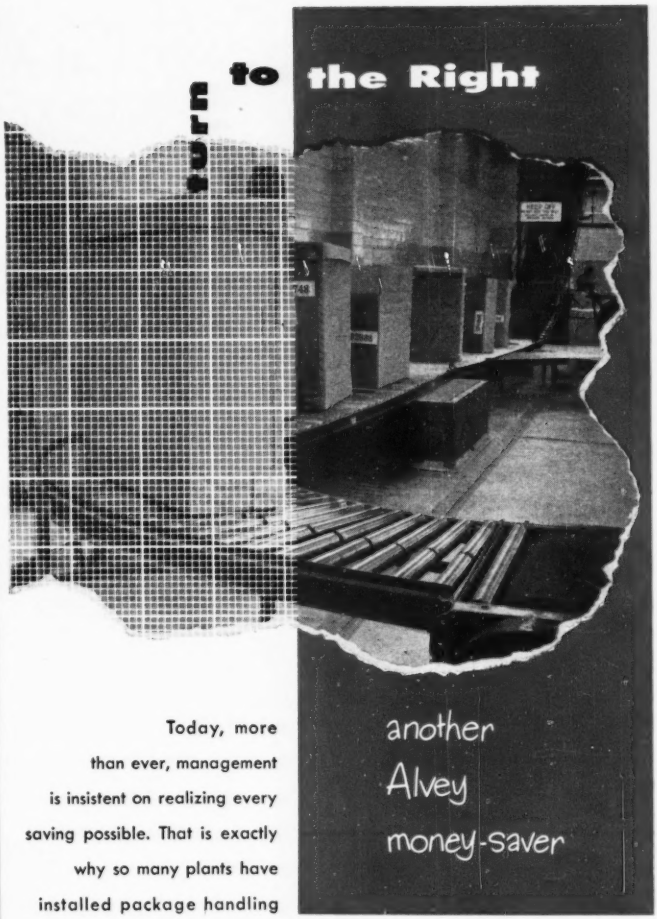
Patterned Glare-Reducing Glass

Aklo Fine-tex is a heat-absorbing and glare-reducing patterned glass designed to provide "filtered daylight" for commercial and industrial buildings. Available in ⅛" and ¼" thicknesses and ¼" wired form for skylights and fire retardant glazings.

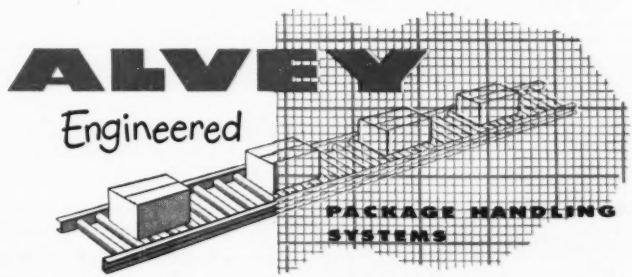
Libbey-Owens-Ford Glass Co., Nicholas Building, Toledo 3, Ohio (E-323).

Electric Radiant Heaters

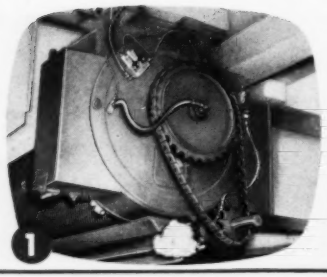
For use in curing plastic laminates, fusing vinyl films, drying fabrics, and preheating jobs, "far-infrared" radiant heaters called Chromalox have been marketed. This heat source radiates energy in the far-infrared portion of the spectrum. The far-infrared radiation is absorbed by glass, for example. Being of long wave length, the rays emanate in a focussed pattern from a comparatively low temperature heat source. The long rays are absorbed almost equal-

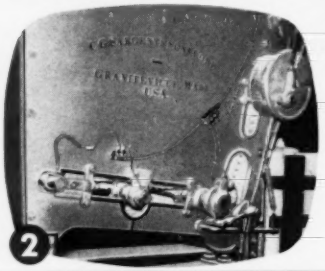


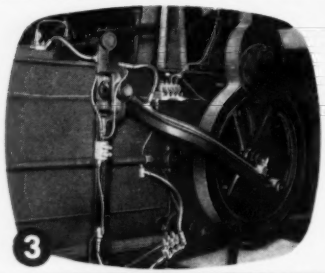
Today, more than ever, management is insistent on realizing every saving possible. That is exactly why so many plants have installed package handling conveyor systems . . . Alvey Conveyors, engineered for the particular requirements of each specific job. Write, and an Alvey Engineer will cooperate with your engineering staff. Do this today.

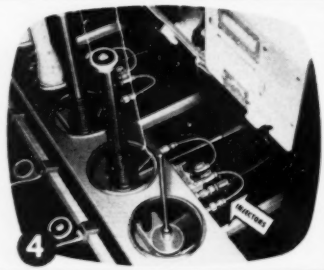


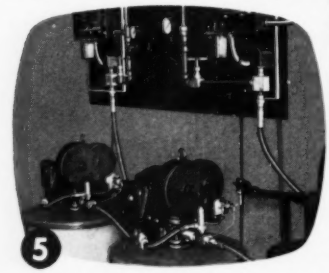
ALVEY CONVEYOR MFG. CO.
Olive Street Road, St. Louis 24, Mo.











at A LEADING CARPET MILL

In New York

Lincoln

CENTRO-MATIC LUBRICATION SYSTEMS

- Eliminate Machine Down-Time for Lubrication.
- Reduce Spoilage Due to Excessive Lubrication.
- Automatically Assure Controlled Application of Pure Lubricant, in the Right Quantity to Every Bearing.
- Reduce Break-Downs and Maintenance Caused by Inadequate Lubrication.

This company, like many other internationally known mills, has found that CONTROLLED APPLICATION OF LUBRICANTS through the use of Lincoln Centralized Systems makes the difference between "preventive maintenance" and "*productive maintenance.*"

IN MILL AFTER MILL, Lincoln Automatic Centralized Systems have increased yield from existing facilities RIGHT FROM THE START, and reduced operating costs in many categories.

ONE THING TO REMEMBER—the cost of using one oil can for two hours a day for 200 working days a year at a labor rate of $1.25 per hour will be $500.00. Just multiply that by the number of oil cans used in the mill, plus all the inherent disadvantages of "hand lubrication," and it quickly becomes apparent why the Textile Industry is converting to Modern Controlled Application of Lubricants.

• • • • • PIONEER BUILDERS
LINCOLN
LUBRICATING EQUIPMENT • • • • •

apply the Right Lubricant
in the Right Quantity
at the Right Time

1. Close-up view of injectors connected by rigid and flexible tubing to critical bearings on a Proctor and Schwartz Dryer.
2. View of injectors connected to bearings on a Sargents Wool Dryer. Lincoln System automatically assures measured application of pure lubricant to all bearings at predetermined time intervals.
3. Hunter Wool Scourer equipped with Lincoln Centralized System. No down-time for lubrication—more production from existing facilities.
4. Close-up view of injectors, as installed, to automatically inject the right quantity of lubricant to rings. Lincoln System serves 96 spindles on each of 14 Whitin Twister Frames.
5. Centralized Pumping Units, electric-motor operated, time clock controlled. Each pump automatically supplies lubricant to distribution system on 7 Whitin Twister Frames. Any one of the two pumps can handle all 14 frames in case of emergency.

Write for your reprints of recent trade paper editorials outlining the amazing SAVINGS effected in mills through the use of Lincoln Centralized Lubrication Systems.

LINCOLN ENGINEERING COMPANY
5702-15 Natural Bridge Ave. • St. Louis 20, Missouri
Distributed Nationally Through Leading Industrial Distributors Located in Principal Cities

ly by all colors and materials, from white to black.

Edwin L. Wiegand Co., 7500 Thomas Blvd., Pittsburgh 8, Pa. (E-324).

Automatic Program Controller for Chlorinizers

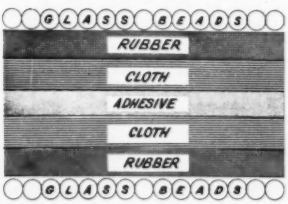
A simple device is available for controlling the feed of chlorine at predetermined rates for predetermined periods in identical cycles to meet variations in chlorine demand as they may occur. The automatic program controller consists of a simple, cam-operated pressure valve so arranged as to transmit varying pressures to the lower diaphragm pressure chamber of the chlorine control valve in a Chlorinizer. The cams are interchangeable with ease to meet the many variables encountered in chlorine demand and dosage. Features: positive and accurate control; pneumatic or water operation; ease of installation; unlimited variety of programs; simplicity of operation; and long, trouble-free service. Self-contained in dust-proof case for panel, wall, or floor stand mounting.

Builders-Providence, Inc., 345 Harris Avenue, Providence 1, R. I. (E-207).

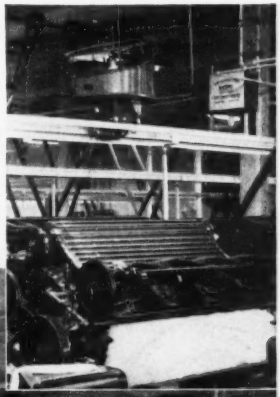
Beaded Fabric Available for Test Purposes

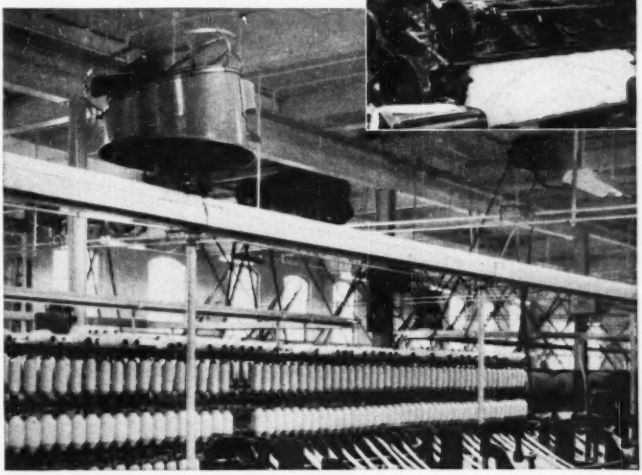
A new beaded fabric designated "Spherekote" is expected to find a wide variety of uses. Its characteristics include a coating of millions of microscopic glass spheres on each side, and an inner lining of cloth and rubber that compresses to provide uniform friction and tightness in use.

The material is made by laminating two sheets of the oil-resistant ma-



The Up-draft Cleaner





Originally designed to be used with the Parks-Cramer Frame Cleaner (mounted on spinning, winding, twisting, and other frames), the Up-draft Cleaner has lately gained its independence and gone into the preparatory areas alone. It has proved particularly effective in the card room. Virtually all hand cleaning of upper areas is eliminated by this automatic, mechanical cleaner.

Operating on our standard track, it goes about its business without getting in the way of belts, shafting, or air conditioning ductwork, either present or contemplated.

With its continuously revolving column of air, it effectively cleans lights, pipes, conduits, and ductwork.

The Up-draft Cleaner is another worth-while investment in better textile mill housekeeping.

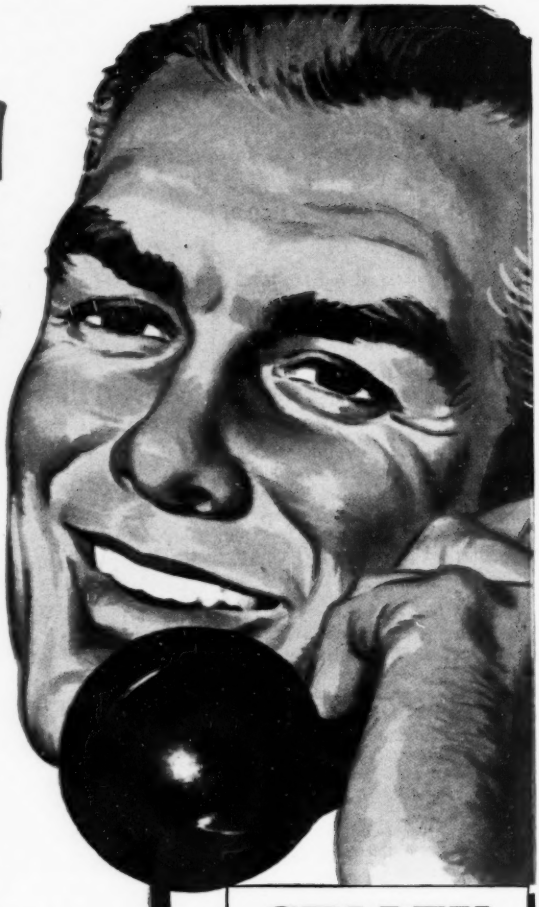
And what a difference a clean room makes!

Parks-Cramer Company

Fitchburg, Mass. Charlotte, N. C.

PARKS Certified Climate

"I've discovered a new, better rayon sizing!"



New STA·GEL *Sizing increases efficiency on difficult rayon weaves*

Staley's new sizing makes possible new efficiency on difficult constructions . . . ends many of the troubles common to rayon weaving. While primarily compounded for use on spun rayon mixtures, it gives equally satisfactory results on combinations of spun rayon with acetate rayon, wool, cotton and other staple fibers.

Important rayon mills now using *Sta-Gel*, report these advantages:

SMOOTHER, TOUGHER SIZE—Each fiber is protected by a smoother, more rugged size. "Fuzz balls" are fewer . . . difficult constructions easier to weave than ever.

MORE STRENGTH AND BINDING POWER—*Sta-Gel* binds the wild fibers to the body of the yarn adding extra strength and weavability.

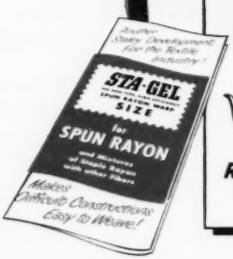
REDUCES SHEDDING—*Sta-Gel* reduces shedding appreciably in mill operation.

IMPROVED LOOM EFFICIENCY—Gives you outstanding loom efficiency on your most complicated spun rayon weaves —lower percentage of seconds.

EASIER DESIZING—*Sta-Gel* desizes perfectly by any conventional desizing method.

COSTS LESS—*Sta-Gel* goes farther, you can cut your size consumption noticeably, and get lower cost sizing for all types of weaves.

A. E. STALEY MFG. CO. • Decatur, Ill., U. S. A.



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Staley PRODUCTS

Research Pioneers in Products from CORN and SOY BEANS ®

IF YOU'RE NOT ALREADY USING *STA-GEL* — get all the facts about this new type rayon sizing. *Write today!*

STA·GEL®

Staley's New High Efficiency Spun Rayon Sizing

Dependable Service from

Atlanta, Ga.
Boston, Mass.
San Francisco, Calif.
Spartanburg, S. C.
Chicago, Ill.
Decatur, Ill.
New York, N. Y.
Philadelphia, Pa.

terial back-to-back. It has a thickness of approximately 55 mils.

Washers, one example of the product's possible use, were recently tested between the folding joints of a car's convertible top. For this use the material's glass-beaded surfaces provided "very low coefficient of friction, distributed pressure evenly, and showed no evidence of scoring."

In addition, the tests showed that the material could be used with or without a lubricant. When a lubricant was used, the minute spaces between the spheres acted as a reservoir for the oil.

Firms wishing to conduct their own experiments with the new material may obtain sample 4" by 6" swatches on request from the company.

Minnesota Mining and Manufacturing Co., 900 Fauquier Street, St. Paul 6, Minn. (E-205).

Concentrator For Use With Controlled Humidity Air Conditioning

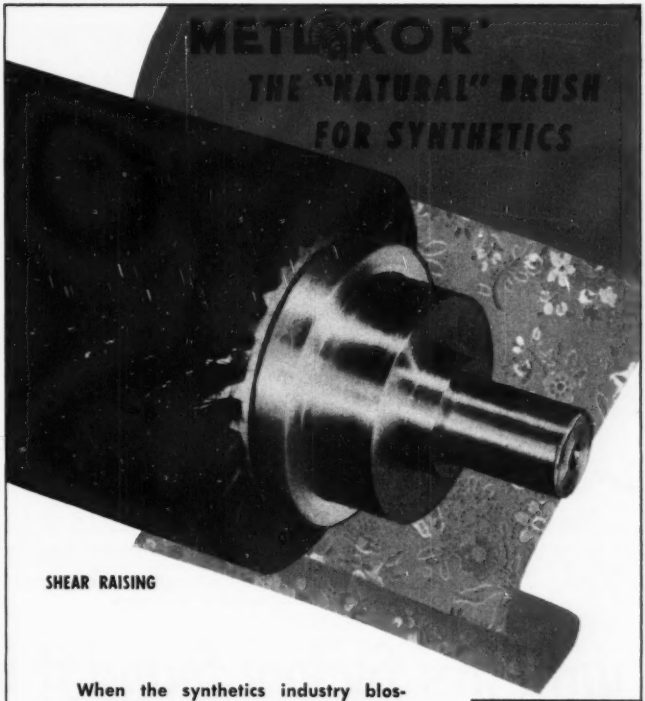
An improved model concentrator for the drying agent used in the controlled humidity method of air conditioning has been announced. A drying agent is used to absorb moisture from air directly, reducing humidity without refrigeration; therefore it is applied to increase the performance of existing air conditioning systems as well as to processes and industries where materials are protected from atmospheric moisture. The consumption of liquid absorbent has been reduced to a point where it is of no importance in practical operations.

Niagara Blower Co., 405 Lexington Ave., New York 17, N. Y. (E-319).

Magnetic Brake

A magnetic brake design that eliminates all levers and linkage has been developed. The brake contains only 6 major operating parts and features a direct, automatic set and release action between the solenoid and armature. Magnetic brakes are suited to fluid coupled motors and gear reducers. The brake is installed on the output shaft of the fluid coupling with the shaft extending through the brake for hook-up to the load.

Reuland Electric Co., Alhambra, Cal. (E-320).



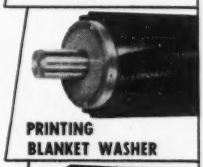
SHEAR RAISING

When the synthetics industry blossomed forth some 25 years ago, M. W. Jenkins' Sons brought their considerable experience to the industry. Having designed brushes for textiles since 1877 and keeping abreast of technological advances, M. W. Jenkins' Sons then and since developed a series of brushes specifically designed to meet the new and challenging problems presented.

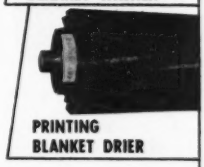
As with all its products, whether for the textile or other industries, Jenkins' METLKOR brushes for synthetics are the best available. They will not sag, split, crack or get out of alignment, are uniformly tufted, filled, trimmed and spaced to give uniform performance. Set in flat wire, they are wound about a permanent metal core which can be rebristled with the same or any other desired bristle.

For any problem requiring brushes, M. W. Jenkins' Sons is prepared to supply a standard or special brush to meet your need.

FURNISHER



PRINTING BLANKET WASHER



PRINTING BLANKET DRIER

OTHER METLKOR BRUSHES FOR SYNTHETICS:

BRUSHING MACHINE CARDING
BRUSHING PRIOR TO PRINTING

1877 • DIAMOND JUBILEE • 1952

M. W. JENKINS' SONS, INC.

Three-Quarters' Century of Pioneering Brushes for Industry

Cedar Grove, Essex County, New Jersey

B.C.* fable of floor space that wasn't there

Once upon a time, back in the olden days BC* (Before Cargotainers) there was a Widget manufacturer with a fine reputation in the trade. His sales policies were sound; his quality good; his prices right.

Yet this doughty Widgeteer had much to worry about. He found himself falling behind his competitors in cost-cutting methods and new product development. What he really needed was more machinery.

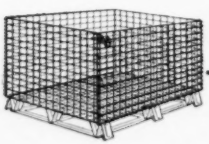
Now, the cost of the new equipment didn't bother him much . . . it was the floor space to put it in that had him buffaloed. He couldn't find it, and he couldn't afford a new building without raising prices.

until this factory found it by going A.C.*

Then the Cargotainer salesman called and the sun began to shine again. Mr. Widgetmaker learned how his raw materials, subassemblies and finished products could be vertically and visibly stored in Cargotainers. Accurate inventories became easy.

Not only did this compact new storage method save the space he needed, all materials and parts remained in their rugged, folding Cargotainers as they moved to assembly line and shipment. Safety records went way up and costs came tumbling down.

Moral: If, by chance, you are BC, you can save space by going AC* (After Cargotainers). Our Materials Handling Engineers will show you how. Write today. Dept. TI, Pittsburgh Steel Products Company, Grant Building, Pittsburgh 30, Pa.



CARGOTAINERS

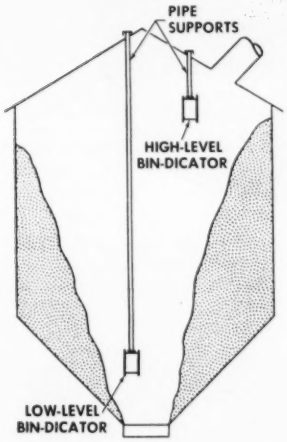
by Pittsburgh Steel Products Company

A Subsidiary of Pittsburgh Steel Company

NEW Equipment AND MATERIALS

Bin-Level Indicator

A special model bin-level indicator solves the problem of securing dependable level indication in large bins, according to an announcement. The unit, known as Model CS Bin-Dicator, is designed for suspended installation and may be located anywhere in the bin where there will be



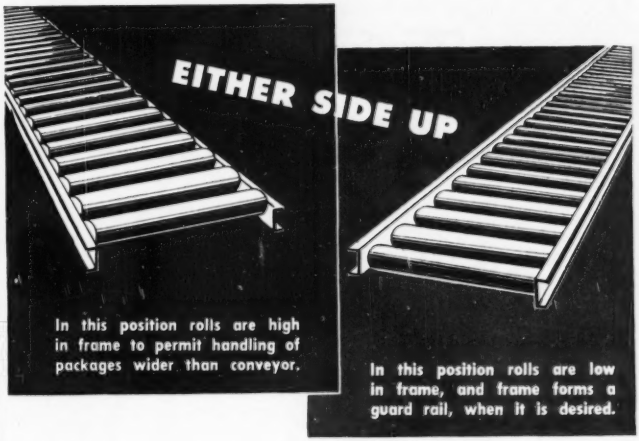
a free flow of material to and away from the diaphragm. Flexibility as to location permits the successful application in bins containing materials which tend to build up on the walls of the bin and to flow down through the central area only.

The Bin-Dicator Co., 13946 Kercheval, Detroit 15, Mich. (E-314).

Portable Viscosimeter

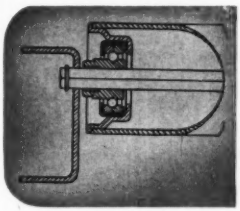
A multi-speed, portable viscosimeter, called the Fann V-G Meter, weighs only nine pounds and may be operated from a 6-volt car storage battery. It is a rotational type instrument with five speeds, electrically driven, permitting sustained rates of shear for any desired period of time.

Its measuring system employs a motor-driven outer cylinder concentric with a stator, the manufacturer reports. The fluid being tested occupies the annular space between the two, and when the outer cylinder is turned at a constant speed, exerts a torque on the stator which is proportional to the viscosity of the fluid. This torque is balanced to a null point


EITHER SIDE UP
In this position rolls are high in frame to permit handling of packages wider than conveyor.
In this position rolls are low in frame, and frame forms a guard rail, when it is desired.

A PRACTICAL FEATURE OF Logan
STOCK ROLLER CONVEYOR

Above is shown one of the practical features of Logan Stock Roller Conveyor. Other features include (a) immediate shipment (b) available in several sizes (c) both straight and curved sections can be furnished (d) both stationary and portable supports available. Write for literature.



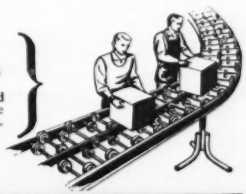
DETAIL OF ROLLER

FEATURES

ROLLER—2¼" O.D. No. 16 Ga. Welded Steel Tubing. Pressed Steel cup secured to tubing. Cap. 150 lbs.
SHAFT—7/16" Hexagon Cold Rolled Steel. Positively locked against rotation by hexagon holes in frame.
BEARING—No. 50. Slip fit in cup, easily removed and replaced. Protected position—set back from end of roll.
FRAME—3½"x 1¼"x10 Ga. Pressed Steel Channel. With four 1-5/16" O.D. 13 Ga. Welded Tubing ties per 10'-0" section. Capacity 75 lbs. per foot with supports on 10'-0" centers and 380 lbs. per foot with supports on 5'-0" centers.
COUPLING—Furnished with bolted type for stationary service. Can furnish hook type for portable service if preferred.

Write or Phone Your Requirements

ALSO Stock WHEEL CONVEYORS
In both straight and curved sections. Ideal for portable use. Light-to-medium duty. Write for details.



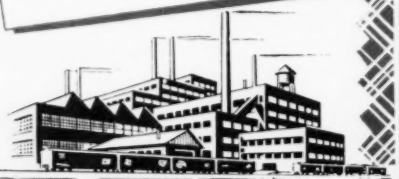
Logan Conveyors
LOGAN CO., 206 CABEL ST., LOUISVILLE, KY.

TC
TENNESSEE CORPORATION

SULPHUR-DIOXIDE
HIGHEST QUALITY
SO_2

Tennessee Liquid Sulphur Dioxide—the chemical with hundreds of uses is now available in Cylinders, Ton Drums, Truck Tanks and Tank Cars. The Tennessee Corporation, producers of highest quality Sulphur Dioxide is located in the great Textile producing area assuring closer contact and speedier more efficient service.

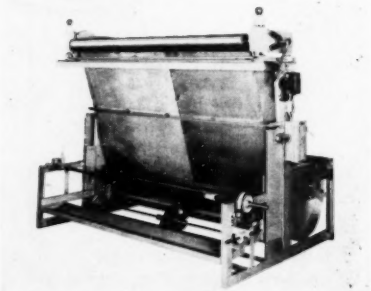
Let us consult with you on the many uses of Sulphur Dioxide. Perhaps Sulphur Dioxide can solve some of your problems . . . 'phone, wire or write Tennessee Corporation, Grant Building, Atlanta, Georgia.



TENNESSEE TC CORPORATION
619 Grant Building. Atlanta, Georgia

YOU GET
Continuous Production
NEW ROLLS SEWED ON *at FULL SPEED*
WITH

Mount Hope
CONTINUOUS ROLL FEED



Above insert shows continuous roll feed with Electric Roll Lift Let Off.

Adaptable to practically any continuous feeding requirement, Mount Hope Continuous Roll Feeds save labor, save time, save cloth, *cut costs!*

ANOTHER Mount Hope CLOTH HANDLING DEVICE

ASK FOR BULLETIN CRFI TODAY.

MOUNT HOPE
MACHINERY COMPANY
15 FIFTH STREET • TAUNTON • MASSACHUSETTS

by suspended weights.

Models have straight line calibration at all speeds. A calibration constant is determined for each speed, and converting the load in grams to centipoises becomes a simple calculation. Viscosity range of the instrument is from 1 to 150 cps; gel strength 0 to 200 gm. Fann V-G meters provide rotor speeds of 200, 300, 400, 500 and 600 rpm.

The instrument is ruggedly constructed, has precision bearings with exposed parts made of chrome plated brass and baked hammertone enamel. Carrying case available.

Geophysical Machine Works, P. O. Box 6101, Houston, Texas.

For additional data, request item E-105, using business reply card on page 220.

Medium and Heavy-Duty Electric Tractors

The Mercury Model A-545 medium-duty electric two-wheel drive tractor is rated at 400 lb normal and 2000 lb maximum drawbar pull; when powered with the specified 48-volt source, attains a light running speed of 7½ mph. "Tiller-bar" controls four-wheel steering system. Travel is manually controlled by three-speed snap-action mechanical contractor unit; foot acceleration available if preferred.

The Model A-800-4 heavy-duty electric tractor is powered by two motors capable of delivering 800 lb normal and 5500 lb maximum drawbar pull. Four-wheel drive; four-wheel steering with automotive wheel-type steering assembly; and foot-pedal accelerator. Four travel speeds in either direction. Directional control mounted on steering column.

The Mercury Mfg. Co., 4044 South Halsted St., Chicago 9, Ill. (E-202).

Instrument Controls Time, Temperature

An electronically operated circular chart controller which can control industrial processes according to time-temperature schedules has been developed. In instances where both time and temperature control are important for product quality and efficiency of operation, the new instrument has an integral-program cam

Look! It's Really Portable—

RIDGID

"400" POWER DRIVE

On Wheels!

Wheel legs and front handles available to convert your present "400" to wheel model; or legs and tray to make bench model into stand.

Power for hand threaders, cutters, reamers now easily rolled where you need it!

★ *One man* can easily wheel-barrow this popular RIDGID power unit close to the work—think of the time and muscle saving!

★ And it stands still and delivers plenty of power—universal motor, forward, reverse, ⅛" to 2"—to 12" with geared tools.

★ RIDGID design 3-jaw chuck, 6 adjusting pinions, one always handy; self-centering workholder in rear.

★ Sealed-in lubrication—no oil to spill.

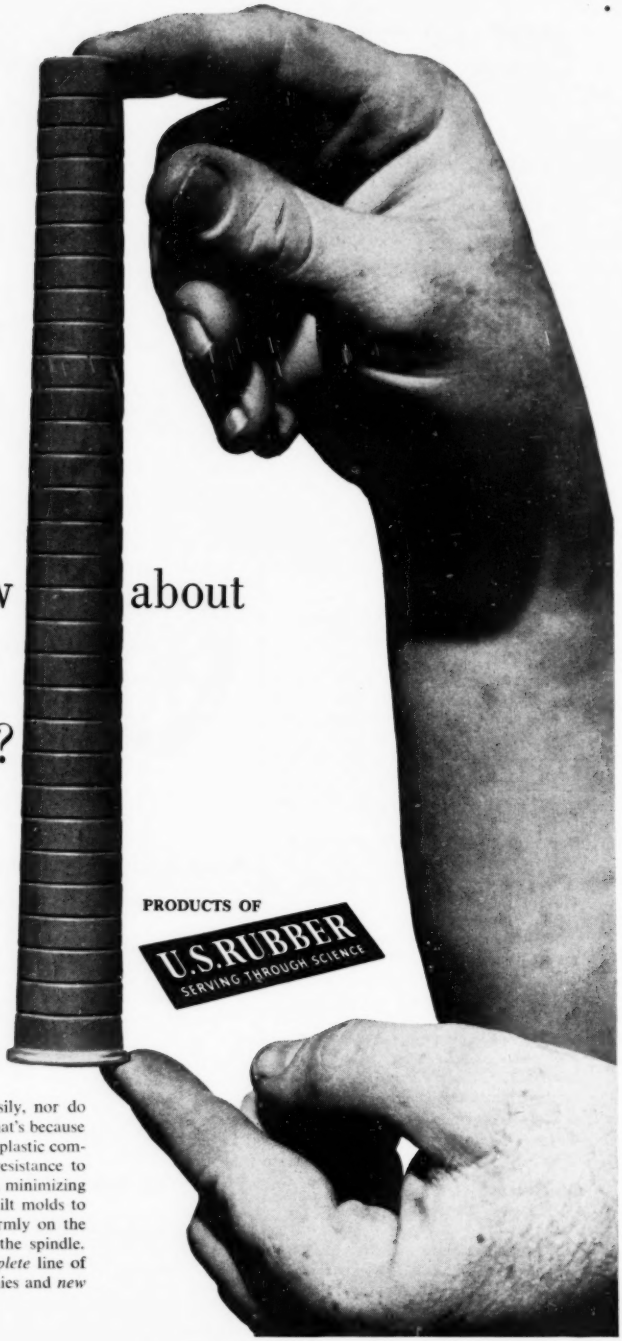
★ See it, compare it—buy the unequalled "400" at your Supply House!

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID

Work-Saver Pipe Tools

What's new about U. S. Rubber's warp tubes?



First, they do not crush easily, nor do they chip, splinter or roughen around the ends. That's because they are made of Uscolite, the sensational rubber-plastic compound. Uscolite warp tubes provide maximum resistance to abuse in a thin-walled tube. They hold yarn well, minimizing sluffing. Because they are molded in precision-built molds to close tolerances, Uscolite warp tubes seat uniformly on the spindles. There is never any working down on the spindle.

United States Rubber Company makes a *complete* line of textile mill specialties, incorporating *new* economies and *new* highs in product quality. Write to address below.

UNITED STATES RUBBER COMPANY

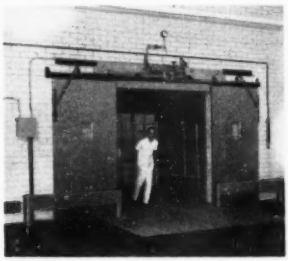
MECHANICAL GOODS DIVISION · ROCKEFELLER CENTER, NEW YORK 20, N. Y.

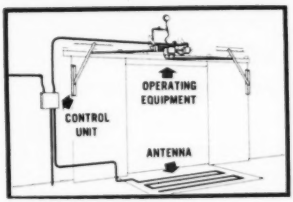
mechanism which automatically positions the instrument control point in accordance with a predetermined program. Available in both electric and pneumatic control.

Minneapolis-Honeywell Regulator Co., Brown Instruments Div., Wayne & Windrim Avenues, Philadelphia 44, Pa. (E-321).

Industrial Door Operators

Doors can be controlled automatically with the Electro-Field control system, with photo-electric controls or with treadle control. They can be manually controlled pneumatically with wall mounted push button valves, ceiling-mounted pull valves or floor-mounted foot valves. Also manually controlled electrically with





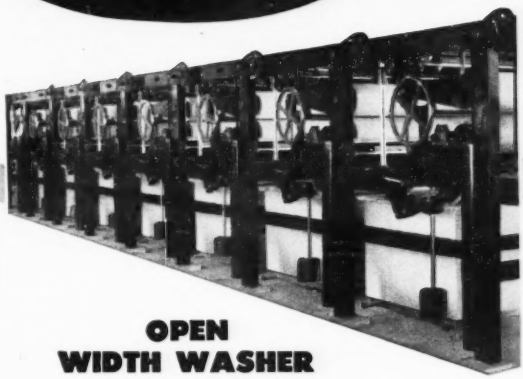
wall-mounted push button switches, ceiling-mounted pull switches or floor-mounted foot switches. All of the control equipment is furnished in kits, which include all necessary material except pipe, copper tubing, and wiring.

National Pneumatic Co., Inc., 125 Armory Street, Boston 19, Mass. (E-302).

Proportioning Weir Tank

A new line of proportioning weir tanks for solutions or suspensions has

INVESTIGATE
Tower
TEXTILE EQUIPMENT



OPEN
WIDTH WASHER

Your investigation will reveal — Tower Textile Engineers are good men to know particularly if you are cost conscious. Our skilled consultants will be pleased to confer with you on the design and installation of the finest in textile equipment, to meet your most exacting operational requirements.

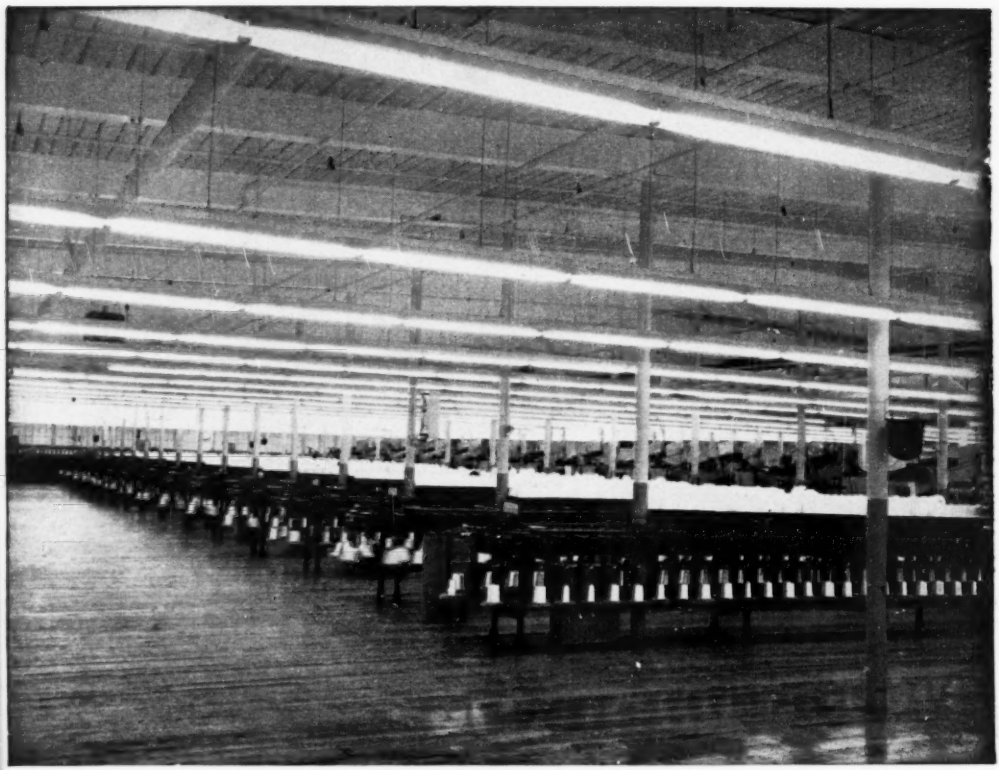
Write for free booklet on Tower Textile Equipment

IRA L. GRIFFIN & SON
Charlotte 1, North Carolina
Southern Representative

Tower Iron Works
Established 1835
50 BORDEN STREET, PROVIDENCE 3, RHODE ISLAND

ABBOTT MACHINE

INSTALLATION OF AUTOMATIC RAYON QUILLERS



Twelve Abbott Automatic Rayon Quillers with Pinboard Attachments are run by only *six* operators in the above mill installation. Such an efficient installation achieves lowest operating cost with maximum production per operator.

Empty loom bobbins are automatically loaded and filled. Full loom bobbins are automatically doffed onto pinboards, which permits one operator to handle up to 240 spindles.

Abbott Quillers offer the lowest investment cost in the automatic winding field.

One of our representatives will be glad to study your filling winding requirements and submit a proposal for your consideration.

ABBOTT MACHINE CO., INC.

FACTORY AND MAIN OFFICE:
WILTON, NEW HAMPSHIRE

SOUTHERN OFFICE: GREENVILLE, SOUTH CAROLINA

NEW Equipment AND MATERIALS

been announced. The devices consist of a specially constructed tank incorporating a stilling chamber, an accurately machined rectangular weir, two outlet chambers and a flow splitter, so arranged that the total flow of solution or suspension to the two outlets can be readily divided into any proportion.

The flow splitter is graduated into per cent of total flow, is instantly adjustable, and has no moving parts, the manufacturer states. It may be fitted with a pneumatic or electric operator and is said to be ideal for controlling the flow of liquids or suspensions in proportioning systems or automatic pH control systems.

Omega Machine Co., 345 Harris Ave., Providence 1, R. I. (E-208).

Giant Fog Nozzle for Large Fires

A giant-size fog nozzle made especially to combat large fires in or out-of-doors is called the Bete Giant Model 500 Fog Nozzle. It delivers a 500-gallon-per-minute fog blanket with a large diameter of coverage and an effective reach of approximately 80 feet, according to the manufacturer. It is claimed that the cooling effect of this large volume of fog will almost instantly extinguish large flammable liquid fires, as well as wood, paint, and other types of hot fires. Made with 2½" National Standard Thread connection.

Bete Fog Nozzle Inc., Greenfield, Mass. (E-209).

New Patents

Patent No. 2,556,055 has been issued to George F. Bahan, of Greenville, S. C., for a **Warp Tension Set Mark Eliminator,** according to Paul B. Eaton, Charlotte, N. C., patent attorney. The apparatus is said to prevent the occurrence of set marks in cloth caused by the relaxing of tension in the warp yarns upon stoppage of the loom. Tension is maintained to overcome this defect, Mr. Eaton reports.

Patent No. 2,554,090 has been issued to Henry A. Dameron of Greenville, S. C., assigned to Greenville (S. C.) Steel & Foundry Company for **Continuous Bleaching Apparatus.** This invention is said to relate to continuous bleaching apparatus em-

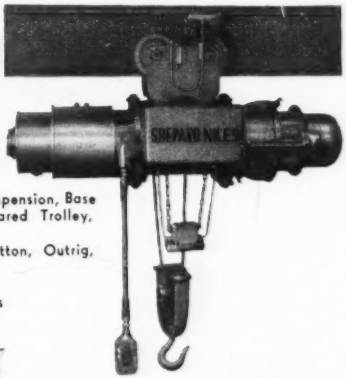
SOLVE MANPOWER PROBLEMS with a SHEPARD NILES Electric HOIST

● One man replaces many — and moves more goods faster — with a Shepard Niles Electric Hoist. These sturdy hoists free valuable floor space, put waste ceiling area to work, enable an older man, woman or youth to handle heaviest loads with ease.

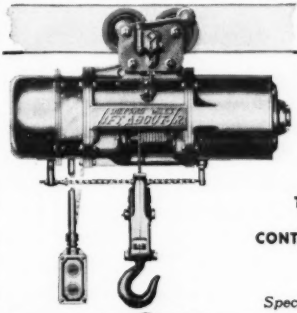
Learn how a Shepard Niles Hoist — in light, medium or heavy capacity — fits into your production picture. Call in the Shepard Niles representative — he'll make sure you get the right capacity and controls for your handling job.

TWO FAMOUS HOISTS

Heavy-Duty SHEPARD NILES Hoist



TYPES: Lug Suspension, Hook Suspension, Base Type, Push Trolley, Geared Trolley, Motor-driven Trolley
CONTROLS: Pendant Rope, Push Button, Outrig, Remote
CAPACITIES: 500 to 40,000 lbs.
SPEEDS: To meet your requirements
Write for Bulletin 127

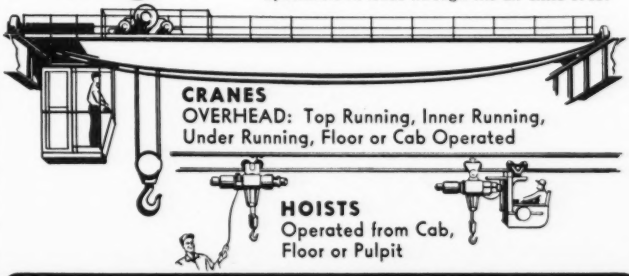


LIGHT SERVICE, LOW COST

LIFT ABOUT-JR.

TYPES: Lug Suspension, Hook Suspension, Push Trolley
CONTROLS: Single Speed, Push Button, Rope Control
Write for Bulletin 171

Specialists in loads through-the-air since 1903.

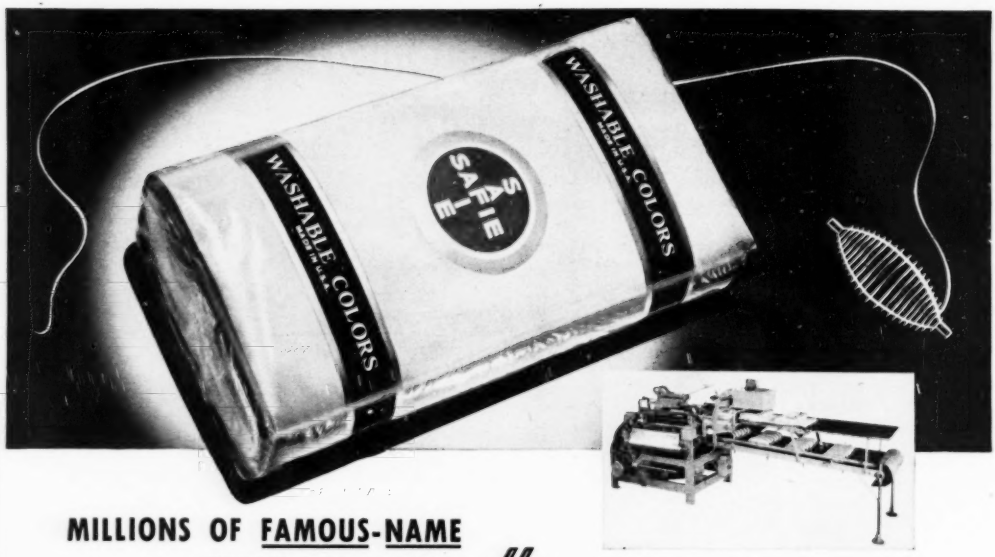


CRANES
OVERHEAD: Top Running, Inner Running, Under Running, Floor or Cab Operated

HOISTS
Operated from Cab, Floor or Pulpit

SHEPARD NILES
CRANE AND HOIST CORPORATION

1917 SCHUYLER AVENUE • MONTOUR FALLS, N. Y.



MILLIONS OF FAMOUS-NAME TEXTILE PRODUCTS wrapped on Hayssen Automatic WRAPPING MACHINES

Save half your money . . . own a Hayssen Automatic Textile Wrapping Machine. A Hayssen unit costs you less than you think and occupies about half the usual floor space. This machine wraps 35 or more packages per minute with one operator. You get a neat, tight, uniform package with electric-eye registration of printed overwrap . . . extra protection for your product and increased sales appeal. The Hayssen Wrapping Machine is easy to adjust and simple to maintain.

A FULL LINE OF MACHINES WRAP

Sheets, Pillow Cases, Bolts of Fabrics, Curtains, Underwear, Shirts, Towels, Handkerchiefs, Hosiery, Batting, Yarn

The Hayssen Textile Wrapping Machine handles heat-sealing cellophane, pliofilm and polyethylene. It overwraps cartons, trays, flat cards and u-boards . . . handles the most delicate fabrics and fluffy material like cotton and wool bats. Special attachments (electric eye, roll-type top labeler and printer, card or u-board feeder) are available.

Over 42 years' experience gives Hayssen machines unmatched performance, low first cost, overall economy of operation and maintenance. Many Hayssen units are in use today that were purchased over 20 years ago.

WRITE for folder on Hayssen Textile Wrapping Machines. Tell us your wrapping problems —we may have the answer.

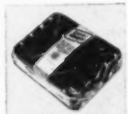
IT PAYS TO WRAP THE HAYSSEN WAY

Hayssen MFG. COMPANY

Dept. TI-5, SHEBOYGAN, WISCONSIN

Since 1910, One of the World's Largest Manufacturers of Wrapping Machines

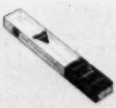
BAKED GOODS


MEATS

TEXTILES

VEGETABLES

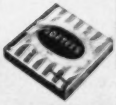
FROZEN FOODS


ODD SHAPES

CANDY

ICE CREAM

DAIRY


PAPER

ploying a J-shaped box wherein the cloth, after being treated with bleaching materials, is passed through a steam chamber or boxes and then deposited into a J-box while live steam is being forced into the steam chamber and into the J-box for the cloth passing through.

Patent No. 2,550,761 has been issued to Ralph B. Blackwood, of Lumberton, N. C., for a **Spinning and Twister Ring.** Mr. Eaton said that this invention provides a yarn guide apparatus for spinning frames and twisters comprising an annular member or ring having a groove extending around its inner surface in which a ring is loosely mounted and to which yarn may be directed from a suitable source such as the drawing rolls of a spinning frame. The yarn passes between the outer periphery of the last-named ring and the bottom of the groove in which it is disposed and then extends to a rotating bobbin.

Patent No. 2,548,899 has been issued to Homer V. Lang, of Charlotte, N. C., for a **Warp Dye Beam.** According to Mr. Eaton, this invention covers a head end member for a warp dyeing beam which has a circular flange on its inner side over which the perforated cylinder of the warp beam fits. This type of construction is said to give a greater strength to the connection between the perforated cylinder and the warp beam head.

Safety Hammer

An improved type of construction is employed in a safety hammer head recently announced. Called the Custanite Flex-Flo safety hammer, the construction consists of a malleable metal hammer having hollow chambers, the inner walls of which are corrugated. Under heavy pounding the corrugations retard the compression of the hammer head and prevent mushrooming.

Custanite Corporation, Larchmont, N. Y. (E-305).

Resilient Packing for Stuffing Boxes

A braid-over-braid asbestos packing impregnated with Teflon throughout is known as Flexrock No. 401 packing. Resiliency is imparted to the Teflon by the integral asbestos fibers, according to the announcement. One size of No. 401 is said to be suitable for packing a number of different stuffing boxes.

Flexrock Company, 3670 Cuthbert Street, Philadelphia 4, Pa. (E-306).

Device Prevents Loom Stops Due to Filling Breaks at Transfer

NEW Equipment AND MATERIALS

Loom stops due to filling breaking out on the transfer are said to be eliminated by a simple device known as the "Leake Bobbin Compensator."

According to the manufacturer of the attachment, it keeps filling bobbins from turning while in the doffing position in the loom battery awaiting transfer to the shuttle. He explained that vibration of a loom usually causes bobbins in this position to turn and either tighten or loosen the filling, with the result that the yarn is broken when a transfer is made.

On the end of the compensator is a sponge rubber tip which is in contact with the bobbin at all times, thereby preventing its turning. It

NON-FLUID OIL
TRADE MARK REGISTERED

The Original Comb Box Lubricant

The initial applications of NON-FLUID OIL in the Textile Industry, over 50 years ago, were made in comb-box lubrication. Its acceptance by practically the entire Textile Industry during the ensuing years is based on the fact that NON-FLUID OIL outlasts ordinary oils six to eight times and remains in the comb-box without slinging off onto the card fillet and the goods or sliver in process.

Heat is usually a sign of wear and power waste, so switch to NON-FLUID OIL and enjoy cool, trouble-free carding. Write for free testing sample of NON-FLUID OIL and Bulletin T5.

New York & New Jersey Lubricant Co.

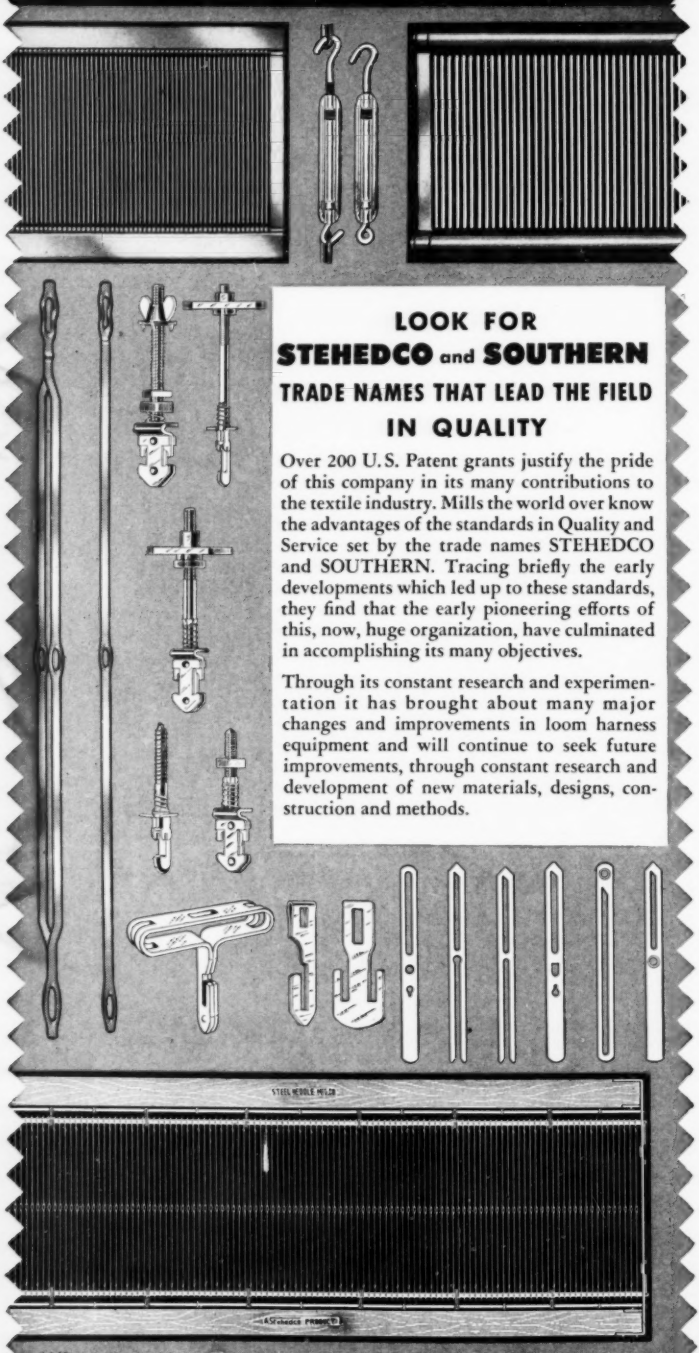
292 Madison Ave., New York 17, N. Y.

Works: Newark, N. J.

WAREHOUSES: Atlanta, Ga. — Birmingham, Ala. — Charlotte, N. C. — Greensboro, N. C. — Greenville, S. C. — Providence, R. I. — St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of NON-FLUID OIL often prove dangerous and costly to use.

Stehedco and Southern



LOOK FOR
STEHEDCO and SOUTHERN
TRADE NAMES THAT LEAD THE FIELD IN QUALITY

Over 200 U.S. Patent grants justify the pride of this company in its many contributions to the textile industry. Mills the world over know the advantages of the standards in Quality and Service set by the trade names STEHEDCO and SOUTHERN. Tracing briefly the early developments which led up to these standards, they find that the early pioneering efforts of this, now, huge organization, have culminated in accomplishing its many objectives.

Through its constant research and experimentation it has brought about many major changes and improvements in loom harness equipment and will continue to seek future improvements, through constant research and development of new materials, designs, construction and methods.

Products that "Weave the World's Needs!"

NEW Equipment AND MATERIALS

moves away from the transferer when the doff is made and immediately engages the next bobbin.

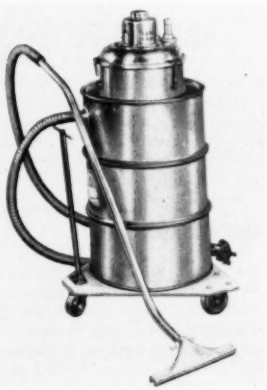
Installation is easy: Remove the existing transfer dog stud and place compensator stud in same hole.

Trinacria Specialty Mfg. Co., Norwich, Conn.

For additional data, request item E-112, using business reply card on page 220.

55-Gal Model of Fool-Proof Wet-and-Dry Vacuum

A new model of the Hild heavy duty portable vacuum is made with a 55-gal tank which holds 5 bushels of dry dirt or 40 gallons of recovered liquid. Quick-opening gate valve permits liquid contents of tank to be easily emptied. Picks up either liquid or dry dirt without adjustment or change of parts. Comes equipped with 20-ft hose made of oil-resistant rubber, wire reinforced for extra strength. Attachments for variety of jobs available.



Hild heavy duty portable vacuum with 55-gallon tank.

Hild Floor Machine Co., 740 W. Washington Blvd., Chicago 6, Ill. (E-201).

Variable Speed Electric Motor Drives

Type KFEA variable speed electric motor drives are available with single reduction gears in ratings of 20 and 25 hp. Speed range, 728 rpm

and lower with infinite speed adjustment within the ranges of 2:1, 3:1, or 4:1. Features include: positive adjustment of pulleys, accurate maintenance of speeds under varying loads, belt tension in proportion to load, positive oil seals, single train helical gears, herringbone rotor, and direct-through ventilation. All ratings are available with drip-proof or splash-proof construction.

Sterling Electric Motors, Inc., 5401 Anaheim - Telegraph Road, Los Angeles 22, Cal. (E-301).

Chemical Feed Packaged Unit

A chemical feed packaged unit delivers liquids in desired amounts under pressure. According to the manufacturer, the unit is suited for feeding boiler water treatment as well as delivering chemicals and other fluids for processing. Available in 50 or 100-gallon capacity.

The Bird-Archer Co., 4337 N. American Street, Philadelphia 40, Pa. (E-307).

Device Traps Water and Oil in Air Lines

A combination separator and trap mechanism designed to remove moisture (and oil) from air lines and compressed air systems is now available. The mechanism removes liquids from the air just before it reaches the air-using machine.

Strong, Carlisle & Hammond Co., Cleveland 13, Ohio (E-308).

Automatic Ice Maker

An automatic ice maker, said to be the smallest commercial type ever developed, has been placed in production. The machine, to be known as Model DER-2, is designed to produce up to 300 pounds of ice in small clear fragments per day without the use of an auxiliary crusher.

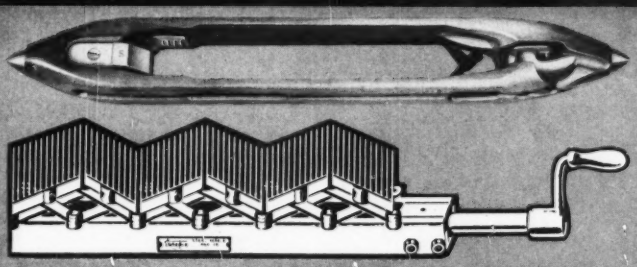
York Corporation, York, Pa. (E-309).

Chlorine Vaporizer

A chlorine vaporizer now available provides high capacity output and is for use in textile mills, in water, sewage, and industrial waste plants, or wherever relatively large quantities of chlorine are required. According to the manufacturer, the unit will vaporize up to one ton of chlorine per hour with minimum steam consumption.

The Whitlock Mfg. Co., Hartford 10, Conn. (E-311).

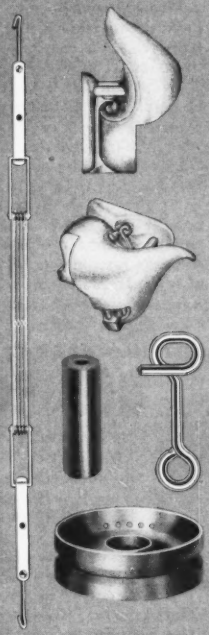
Stehedco and Southern

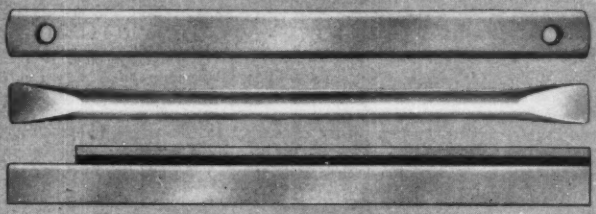


LOOK FOR
STEHEDCO and SOUTHERN
TRADE NAMES THAT LEAD THE FIELD IN SERVICE

The service obtainable from the loom harness manufacturer is as important to the mill as product quality. The Steel Heddle Manufacturing Company, not content with producing better loom harness equipment and accessories, has made every effort to provide the most efficient and economical distribution and service possible. The location of their many large plants and branch offices has been strategically planned for the benefit of the textile industry.

Competent staffs of Field Engineers are maintained for the express purpose of assisting with mill problems. These men appreciate new applications; they understand what successful product performance means.





STEEL HEDDLE MFG. CO.
2100 W. ALLEGHENY AVENUE PHILADELPHIA 32, PA.
Other Offices and Plants
Greenville, S.C. • Atlanta, Ga. • Greensboro, N.C. • Providence, R.I.

SOUTHERN SHUTTLES Paris Plant... Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.

STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street Granby, Quebec, Canada 1-L-10

Products that "Weave the World's Needs!"

WINDING GLASS FIBERS?
USE DILECTO

A leading glass fiber yarn manufacturer found this C-D-F laminated plastic tube the answer to his bobbin problem. Made from XX—80, C-D-F's special textile grade of Dilecto, the body had high mechanical strength, uniform balance and no whip. Mass-produced at one of C-D-F's large fabricating plants, this Dilecto tube was supplied with a ±.005″ tolerance on the ID. Remember, Dilecto is non-snagging, noncorrosive, light in weight (½ of aluminum), resistant to heat, moisture, chemicals. Dimensionally stable. Available in sheets, rods, tubes . . . all easily machined.

CUTTING GEARS?
USE CELORON

Build silence into your textile machinery with gears of golden Celoron. This light weight, resilient canvas-based plastic has been service-proven in millions of automotive timing gears made by C-D-F. Have your cutter supply you with Celoron gears. They last longer, stay quiet, and are a modern replacement for metal.

The F in C-D-F means Vulcanized Fibre, a rugged, economical material used in receptacles, roving cans, loom parts, molded or punched specialties. Visit C-D-F at Spartanburg, S. C., or write for Fibre catalog. See all the trucks, baskets, materials handling products made by C-D-F. *Move fast, save money* with C-D-F Fibre!

Have a special problem in plastics? Write Textile Research Section, C-D-F, Newark, Delaware. Catalogs, technical information, samples forwarded promptly.

Continental-Diamond Fibre Company
NEWARK 11 DELAWARE

NEW Equipment AND MATERIALS

Dye Kettle for Pile Fabrics Has Unique Reel

A new piece dye kettle was developed primarily for dyeing pile fabrics and other face finish goods in open width, as well as other types of goods in rope form.

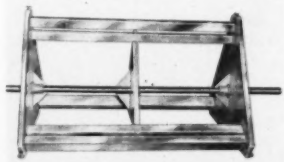
The tank is made of stainless steel, with seams welded both inside and out. Safety-type enclosure doors slide downward below the floor line. Steam escapes from the top as they begin to open, thus protecting the operator from burns.

Included as standard equipment are a bakelite spreader bar to keep out wrinkles when running open-width goods, a built-in pin guide rail for goods in rope form, a spiral delivery roll, and a folder unit with stainless steel draw rolls driven by separate gear motor that may be run only when unloading to eliminate the usual belts or chains from delivery roll to main reel shaft. The gear motor drive has three easily changed speeds.

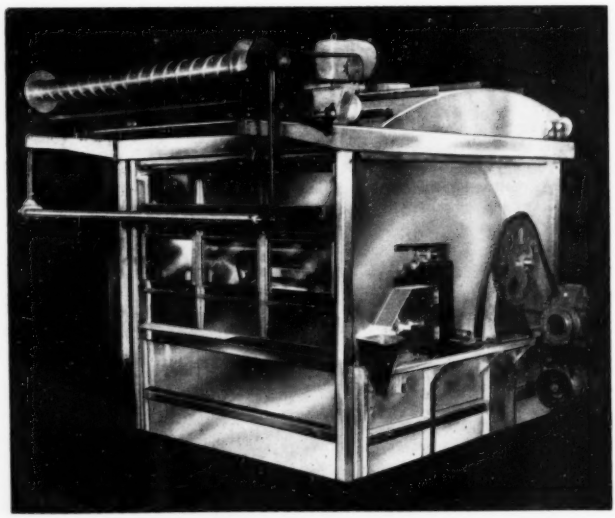
The special feature claimed for this dye kettle is a triangular reel with three tilting bars for supporting the goods. Supported at their centers by a swivel mounting, either end of the bars tends to slope in the opposite direction should the cloth work towards one end of the reel, thereby keeping the cloth centered.

James Hunter Machine Co., North Adams, Mass.

For additional data, request item E-108, using business reply card on page 220.



SPECIAL FEATURE of James Hunter's piece dye kettle for pile fabrics (below) is the triangular reel shown at right.



Clean and Sanitize Personal Safety Equipment

Personal safety equipment—face-shields, respirators, mask facepieces, ear defenders, clothing—can be cleaned and sanitized thoroughly, quickly, and with ease by use of the new "MSA Cleaner-Sanitizer," according to the manufacturer.

It comes in dry powder form, 25 one-oz. envelopes to a carton, is easily stored, safe and convenient to handle. User simply adds an ounce of

powder to a gallon of luke-warm water, equipment is cleaned, rinsed, and allowed to air-dry.

Mine Safety Appliances Company, Braddock, Thomas, and Meade Streets, Pittsburgh 8, Pa. (E-204).

Belt Trainer

A positive-action belt trainer that automatically keeps wandering conveyor belts aligned is now being manufactured. The trainer may be installed on any make of conveyor which has the return belt exposed beneath the bed. It is designed for use on fabric or rubber-covered belts 3/16-inch or more thick, operating at speeds up to 200 feet per minute.

The Rapids-Standard Co., Inc., 342 Rapistan Building, Grand Rapids 2, Mich. (E-312).

Carton Stapling Machine

An automatic carton stapling machine, Model TH1-HAS, is recommended for closing overlap cartons and for end closure on long narrow cartons of either the overlap or slotted type. It is air-operated and automatically functions when the operator presses the carton against the stapling head.

International Staple and Machine Co., 801 East Herrin St., Herrin, Ill. (E-313).

Electro-Oiling System

Oil-Rite Electro-Oiling System Style DEI is a single line gravity feed system for use on applications where points to be lubricated are far apart. Oil is released by gravity from a reservoir by a solenoid-operated valve. Sight feed valves are provided and may be individually regulated.

Oil-Rite Corporation, 2318 Waldo Blvd., Manitowoc, Wis. (E-303).

Blindstitch Label-Tacking Machine

A high-speed automatic blindstitch label-taking machine, Model 160-2, has been announced. The machine operator places the label in position, steps on the starting treadle, and the label is tacked, the thread is cut close to the work, and the machine stops with the needle up and out of the way. The machine works equally well on fine silks and heavy materials, according to the manufacturer.

Lewis Invisible Stitch Machine Co., 129-131 West 22nd Street, New York 11, N. Y. (E-304).

"Buffalo" *Tips on Better Pumping*

RIGHT SPECIFYING PREVENTS HEADACHES

TELL YOUR PUMP SUPPLIER
Everything About the Job!

Every pump is designed to perform best under certain conditions. Therefore, your pump supplier needs a *complete* description of all expected pumping conditions, with your request for a quote.

This should include:

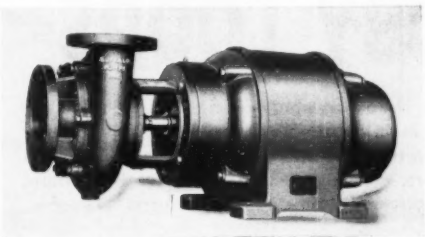
(1) *Description of the liquid:* Temperature, corrosive and/or abrasive characteristics, specific gravity, viscosity and vapor pressure under service conditions. Include, if possible, a chemical analysis. This enables the supplier to recommend the right materials, also the right design of pump for the job.

(2) *Capacity—both operating and maximum—in gallons per minute* —so that a pump may be selected within the range of highest efficiency.

(3) *Type of drive (direct or belt), type of driver (engine, turbine, motor) and speed.*

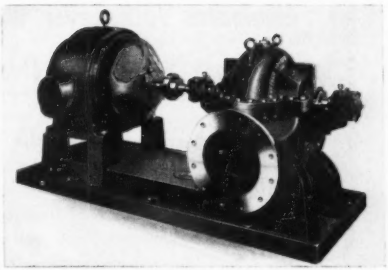
(4) *Discharge pressure or head of liquid to be pumped.*

(5) *Suction lift or suction head.*



Complete information assures getting the right pumps and often enables the manufacturer to suggest an alternative which might be cheaper and more efficient. "Buffalo" engineers will be happy to give you helpful advice on selecting the best pump.

Double suction, hydraulically balanced, "Buffalo" Type "SL" Clear Water Pumps are widely used in Textile Plants for chilled water, air washer and other clear water service. 10 to 10,000 gpm capacities.



Close Coupled for close quarters, this *compact* "Buffalo" Pump is sturdily built for long service.

"Buffalo" PUMPS

BUFFALO PUMPS INC.

171 MORTIMER STREET BUFFALO, NEW YORK

Canadian Blower & Forge Co., Ltd., Kitchener, Ont.

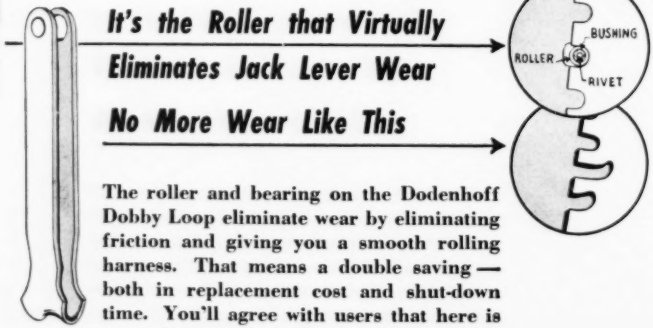
Sales Representatives in all Principal Cities

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

DODENHOFF *Anti-Friction*

DOBBY LOOPS

That's good news for would-be users previously disappointed by our inability to make deliveries of this smallest big money saver in textiles. We've expanded production and caught up on back orders. We can now promise prompt shipment from stock either now or in the future.



It's the Roller that Virtually

Eliminates Jack Lever Wear

No More Wear Like This

The roller and bearing on the Dodenhoff Dobby Loop eliminate wear by eliminating friction and giving you a smooth rolling harness. That means a double saving — both in replacement cost and shut-down time. You'll agree with users that here is one of the greatest investments you can make.

W. D. DODENHOFF COMPANY
INCORPORATED
GREENVILLE, SOUTH CAROLINA

3″ Roll-Type Expander Requires No Lubrication

Development of a 3″ diameter rubber covered roll-type expander, designed to meet the stretch requirements of every fabric from light rayons to ducks or tire cord fabrics and rolled sheet plastics, has been announced.

In addition to requiring a minimum of space because of its small diameter, the expander turns easily under low or high tension, it is claimed. Maintenance costs are said to be reduced because the bearings are permanently self-lubricating and have a low coefficient of friction. Metal parts are of stainless steel construction, and with a thick high quality rubber roll cover provide an expander that, according to the manufacturer, is resistant to corrosive conditions found in dyehouses and bleacheries.

Raybestos-Manhattan, Inc., Manhattan Rubber Div. Passaic, N. J.

For additional data, request item E-601, using business reply card on page 220.

Low Resistance Ohmmeter

Designed for maximum convenience in field use, a new Megger low resistance ohmmeter is completely self-contained with a compartment for storing leads and hand spikes. Supplied in two models; both having the same ranges of 0 to 1000 and 0 to 10,000 microhms. Model 1 B is battery-powered; Model 1 R has a built-in rectifier which can be plugged into any ordinary lighting circuit. Weight, 19 lb. Applications include routine tests on circuit breaker contacts, relay switches, bonds, connections, and joints, and bar-to-bar tests on commutator type armatures.

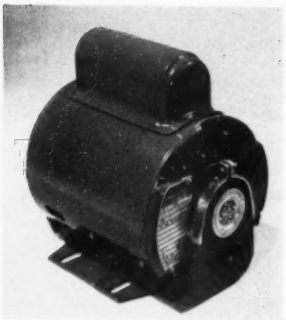
James G. Biddle Co., 1316 Arch St. Philadelphia, Pa. (E-602).

Temperature Regulator Features Simplicity

The Type 1005 self-operated, self-contained temperature regulator features design simplicity which allows quick, easy disassembly for relapping and cleaning in the field.

Other advantages: visual finger-tip dial control, built-in strainers to protect pilot and main valves, stainless steel seats and discs, internal porting to eliminate external damage and minimize maintenance. Control accuracy, plus or minus 1 F. Sizes 2″ through 4″.

Farris Stacon Corp., 547 Commercial Ave., Palisades Park, N. J. (E-603).



New Line of Fractional Horsepower Motors

The "Form G" fractional horsepower motor recently announced weighs as much as 51 per cent less per horsepower than the model it replaces and is considerably smaller in size. Also, its versatility of application has been broadened and its appearance modernized. Available in open drip-proof and totally enclosed fan-cooled models in Types K (polyphase), KC (capacitor start), KH (splitphase), and KCP (permanent split capacitor).

General Electric Co., Schenectady 5, N. Y. (E-401).

10 hp Air Conditioner Is Self-Contained

A new Unitaire air-conditioner, the MU-101 is available. The 10 hp self-contained unit is for conditioning offices, manufacturing areas, or other applications that call for economical air conditioning. Two 12-inch, double inlet fans nominally deliver 4000 cubic feet of air per minute. Cabinet measures 91" high when top mounted, and 61" by 32" at the base. Side mounted, it is only 62" high.

Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa. (E-318).

Dynamic Balancer for Rotating Parts

A dynamic balancer offers a shop method of indicating unbalance in rotating parts weighing up to 100 pounds without making specially fitted bearings, adapters, or universals. Designated the Raydyne "595," the unit is a floor model designed expressly for repair shops with a wide variety of balancing work.

Welch Mfg. Co., Springfield, Ill. (E-315).

Plastic First Aid Dressing Inconspicuous, Sheds Dirt

The new "Band-Aid" Plastic Strips (strips of plastic adhesive tape with a small pad of absorbent gauze in the center) are said to be inconspicuous because of their flesh color; also they shed dirt and grease, the manufacturer claims. They do not get loose or soggy when wet; stay put on finger joints and other hard-to-bandage places without binding. Come individually wrapped and completely sterile. Women operatives are reported to be less inclined to conceal minor hurts when these strips are available because of the fact that they are not unsightly.

Johnson & Johnson, 1940 George St., New Brunswick, N. J.

NEW Equipment AND MATERIALS

PUMP IT THIS Simple WAY

PROGRESSING-CAVITY ACTION DOES THE "IMPOSSIBLE"

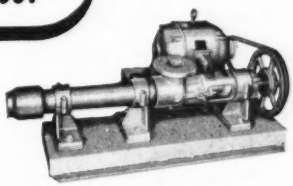
What Can It Do For You!

- NO PISTONS
- NO VALVES
- NO HIGH-SPEED IMPELLERS

Whether you want to pump sizing, caustic solutions, tinting liquids, viscose or cellulose acetate, you'll find Moyno performance a welcome aid to uninterrupted production, for Moynos are just as famous for *stamina* as they are for outstanding ability.

Moynos self-prime, pass particles and solids in suspension, resist *abrasives and chemicals* deliver uniform flow in positive pressures to 1000 p.s.i. They won't cavitate or vapor-lock, and bearings are isolated.

No other pump is like the Moyno—it's built to *stand up* on tough jobs. That's why mill after mill is switching to these simple, versatile units. Ask any user for his opinion of amazing R & M Moynos. Or ask us to mail *you* Bulletin T-30-I.



A TYPE AND SIZE FOR EVERY NEED

Made in seven frame sizes in single- and multi-stage units with longer pumping elements. May be direct-connected, belt-driven, or variably operated for metering. Capacities to 250 g.p.m.

R & M MOYNO® PROGRESSING-CAVITY PUMP

ROBBINS & MYERS • INC.

SPRINGFIELD 99, OHIO • BRANTFORD, ONTARIO

MOTORS • HOISTS • CRANES • FANS • MOYNO PUMPS

EXCEL

No. 1000 Fibre Truck For Long and Satisfactory Service

This is a sturdy truck upon which you can depend for long and satisfactory service.

Compare its specifications with those of any other fibre truck.

- .090 vulcanized fibre, securely riveted to hardwood rails with solid steel rivets. These solid rivets are placed at short intervals to prevent buckling.
- Hardwood solid or slatted bottom, sanded to a smooth finish.
- Heavy duty metal top rail.
- Heavy duty metal corners.
- Casters securely bolted to bottom.
- Finished in clear lacquer, or painted, for added protection against moisture.

Representatives:

Mr. N. W. Eurey.....Lincolnton, N. C.
Mr. Paul Eurey.....Lincolnton, N. C.
Industrial Suppliers, Inc.
La Grange, Ga.
Fall River Mill Supply Co.
Fall River, Mass.
Mr. Theodore Huston
2601 N. Broad St., Philadelphia, Pa.

EXCEL

Textile Supply Co.

"Excel Trucks Excel"

LINCOLNTON, NORTH CAROLINA

NEW Equipment AND MATERIALS

Rust-Preventing Paint Dries in Ten Minutes

An improved formula of its Certified Rust Inhibitor No. 425 is announced by United Laboratories, Inc. Outstanding features claimed for this rust-preventing paint are that it will dry in 10 minutes under normal drying conditions and one coat provides excellent hiding of the old metal surface, reducing painting costs up to 50%. The new formula, known as "Rust Inhibitor No. FD-425," will withstand temperatures from minus 100 F to plus 250 F it is claimed, and is exceptionally resistant to salt air and fumes. It may be applied over damp surfaces, interior or exterior, galvanized metal, and new or rusted metal surfaces of all kinds. An attractive, semi-gloss finish is left. Available in several colors plus aluminum and clear.

United Laboratories, Inc., 16801 Euclid Ave., Cleveland 12, Ohio (E-402).

Sound-Level Meter

The GR Sound-Level meter measures product noise quickly and simply both in the design department and in production. It is useful for studying noise levels in working areas involving employee safety, comfort, and efficiency. Other applications include psycho-acoustic studies, measuring the performance of systems transmitting music and speech, and evaluating the characteristics of acoustic materials.

General Radio Co., 275 Massachusetts Ave., Cambridge 39, Mass. (E-325).

Homogenizer Handles 800 Gallons Per Hour

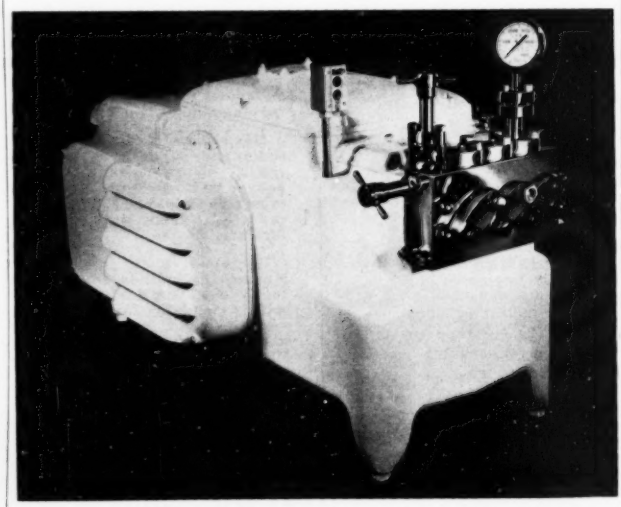
This Model A-800-C Superhomo homogenizer with a capacity of 800 gallons per hour is available with a single or two-stage valve, and all product surfaces are of stainless steel.

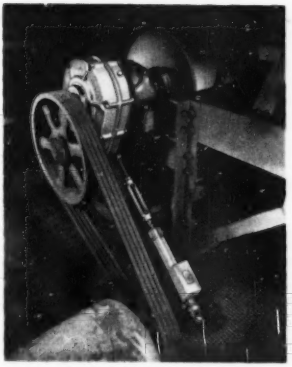
Increased capacity has been obtained by using a plunger of a larger diameter, the manufacturer claims. Slow speed at the drive end and extra large helical gears help assure long life and low maintenance costs.

Maximum operating pressure is 2500 psi.

Cherry-Burrell Corp., 427 West Randolph St., Chicago 6, Ill.

For additional data, request item E-104, using business reply card on page 220.





Dodge No. 7 speed reducer with Tri-Matic overload release.

Speed Reducer

A double reduction shaft-mounted speed reducer with capacity up to 43 hp, and for output speeds from 12 to 110 rpm, has been announced. The No. 7 reducer has 59% greater horsepower capacity than the No. 6 previously announced.

Dodge Manufacturing Corporation, Mishawaka, Indiana (E-310).

Stainless Steel Fog Nozzles

A line of all-stainless steel fixed installation fog nozzles for industrial processing and fire protection has been announced by the manufacturer. The new nozzles, known as the AA Series, are smaller in size and lighter in weight than previous models.

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facturer points out.

Other features cited for the new machine are: triple production over hand laying-up methods; cloth laid up perfectly on edges because spreader guides it through the rollers, eliminating racking later; ends are laid evenly; ball bearings throughout; requires no oiling.

J. A. Firsching and Son, 421-423 Broad St., Utica 2, N. Y.

For additional data, request item E-404, using business reply card on page 220.

New Books

How To Supervise People, by Alfred M. Cooper. Third edition discusses the supervisor's role in handling human relations problems that affect the productive efficiency of his employee team. Problems discussed are: job training, delegation of authority, accident prevention, layoffs, discipline, and the intricacies of labor-management relations. 254 pages, price $3.75. McGraw-Hill Book Company, 327 West 41st Street, New York 36, N. Y.

Water Treatment for Industrial and Other Uses, by Eskell Nordell. Industrial uses of purified water are exhaustively covered by Nordell to provide a practical and up-to-date reference in all fields ranging from brewing to steel making. 525 pages, $10.00. Reinhold Publishing Corp., New York 18, N. Y.

Manufacturing Processes, by Myron L. Begeman. Third edition classifies and describes in detail the latest manufacturing machines and their operations. Explains the advantages, limitations, and range of application of each machine and process. Covers foundry practice, pattern work, plastic molding, metallurgy, hot and cold metal working, and heat treatment and welding. 608 pages, $6.00. John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, N. Y.

Identification of Textile Materials. The third edition of the Textile Institute's "Identification of Textile Materials," produced by a sub-committee of the Institute's unification of testing methods committee, is available. The book comprises 94 pages, including six analytical tables, 64 plates, an index, and a list of trade names of British and overseas rayons. The Textile Institute, 10 Blackfriars Street, Manchester, England.

Proceedings of the 15th Annual Time and Motion Study and Management Clinic. Complete transcripts of talks by leaders of labor, management, and government on various topics including time study, motion economy, methods, plant layout, materials handling, wage incentives, maintenance, and human relations. Published by the Industrial Management Society, 35 E. Wacker Drive, Chicago 1, Ill. Price $4.00.

Applied Textiles, Raw Materials to Finished Fabrics, by George E. Linton and Joseph J. Pizzuto. Fifth edition compiled with special emphasis on the integration of textile information with the wearing apparel industries. Text prepared for those interested in textile and apparel trades, specific, general, or applied. 385 pages, school text, $4.75; trade edition, $6.00. Lifetime Editions, Inc., 120 East 25th Street, New York 10, N. Y.

ASTM Papers on Evaluation of Soaps and Detergents. Significant papers, sponsored by ASTM Committee D-12, present new techniques for evaluation of soaps and detergents. Special Technical Publication No. 115. 64 pages, $1.50. American Society For Testing Materials, 1916 Race St., Philadelphia 3, Pa.

Vinyl and Related Polymers, by Calvin E. Schildknecht. Preparations, properties, and applications in rubbers, plastics, fibers, and in medical and industrial arts. Stressing the experimental, practical, and commercial aspects of the subject. 723 pages, $12.50. John Wiley & Sons, Inc., 440 Fourth Avenue, New York 16, N. Y.

Textiles A Dynamic Industry, by E. C. Bancroft, W. H. Crook, William C. Kessler. Covers some of the more insistent industry problems and trends, followed by an analysis of the problems of the textile fibers, the basic raw materials of the trade. Highlights the development of eight companies, representing varied textile types. Chapters on corporate concentration and the problem of selling or retaining control over textile mill villages. Colgate University, Department of Economics.

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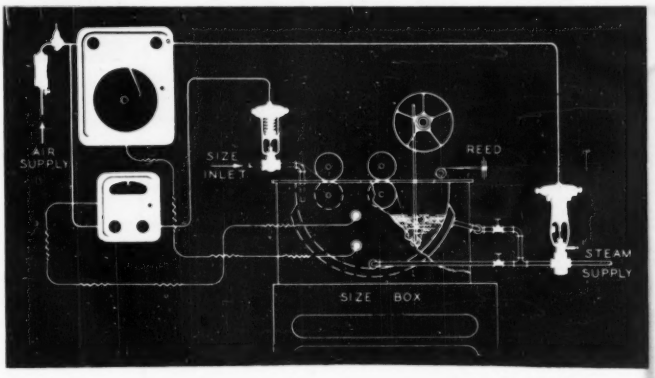
Masoneilan

Automatic Size Box Temperature Control Maintains Uniform Size, Insures Yarn Uniformity



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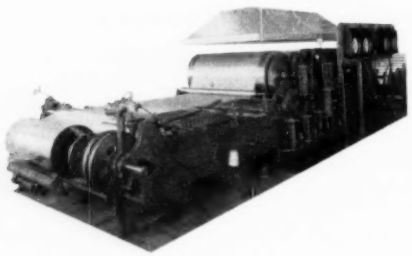

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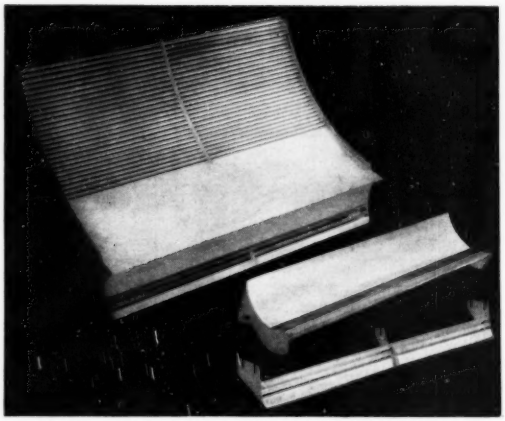

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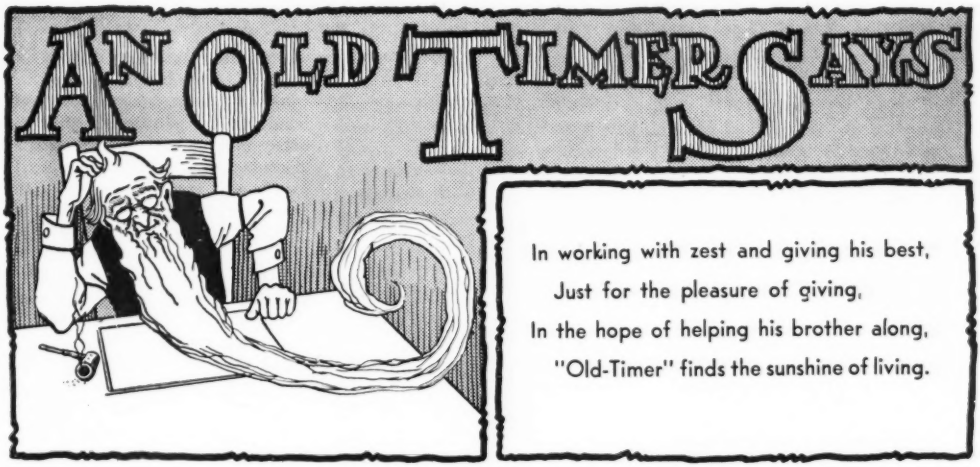
AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

During the Last Textile Show

AS TIME DRAWS NEAR for the 17th Southern Textile Exposition to be held in Greenville, S. C., October 6-11 this year, "Old-Timer" reflects on his visit to the one held in 1950.—Eds.

THE TEXTILE show in Greenville, S. C., October 1950, was one of the best OLD-TIMER has attended. Certainly he had a most pleasurable time meeting old friends, some of whom he had not seen in many years. OLD-TIMER also got quite a few ideas from studying the new machines and the great number of new gadgets and accessories for both new and old equipment.

Of course, there also was the rather depressing experience to us OLD-TIMERS that many of our former friends were absent, due to the fact that Father Time had taken his toll. For example, we were discussing the trials and tribulations we went through in getting the first shows started, when my friend to whom I was talking mentioned the fact that there were only a few of us left [OLD-TIMER was instrumental in getting the STE started].

We doubt that many of the thousands of people who attended this show knew anything at all about the many obstacles which had to be overcome before Textile Hall became a reality. The first building erected soon experienced financial troubles and had to be refinanced. This was done partly by soliciting all the textile men, overseers, superintendents, presidents, managers—anybody we could find who would buy even $100 worth of stock.

I have before me here on my desk a Building Certificate issued on October 29, 1923, by Textile Hall Corporation as part of an issue for the purpose of retiring all outstanding stock, etc. By the way, I notice it bears 6% interest. Boy! Would I have a nice little pile if I could collect?

Anyway, Textile Hall is now a wonderful success. A great advertisement for the South. And all OLD-TIMERS who had a hand in its development are very proud of it.

Then at the last textile show we experienced quite a few unusual and most pleasant meetings with machinery representatives and overseers and superintendents. For example, we went into one booth to look at the exhibit on display and got into conversation with one of the salesmen. During the conversation this man handed me his business card. I looked at the name, William Morgan (not his real name), and it brought to mind a man by the same name who ran a section next to me years and years ago, before 1900.

I mentioned the fact to Morgan and he questioned me as to where, what mill, and about what time it was when I knew this section man by the name of Morgan. Finally he said: Well, OLD-TIMER, that was

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my father. Then, by George, I thought I would never get away from that booth. I had to tell him all about his father.

One amusing incident I told him about was that I had a bicycle and had just bought a luggage carrier for it when his father borrowed the bicycle one Saturday afternoon to ride downtown. When he returned my luggage carrier was broken beyond repair. It was made of very thin board and covered with cloth—a heavy luggage carrier would, of course, not be suitable for a bicycle. Well, Morgan put a dozen bottles of beer in the luggage carrier and about half way home, the carrier broke and his beer rolled all over the street.

At one of the banquets we were invited to during the textile show, we sat between an overseer of weaving and an assistant superintendent. After introductions the overseer of weaving said: Are you OLD-TIMER? We countered by asking him where he was from. And when he told us, we were dumfounded. We started up the mill where he works now, over 40 years ago. We told him that we walked the same floors he is walking today, before he was born. As we began to relate some of the things which occurred back in those days, he and the assistant superintendent became so interested that we caught a chance and slipped out from the banquet for a good long confab. We were still talking when the banquet was over.

Some of the things we talked about to these two young textile operating executives were very amusing to them. For example, we explained how we made our own belt cement, soap, and sizings. We had humidifiers only in the weaving department when the mill first started and with nothing in our sizing compound to attract moisture; when we had a long dry spell there was very little moisture in the air and our warp breakage in weaving was very high—especially if it was windy like March usually is.

There were no sizing firms to help a fellow out in those days. There was one firm in Atlanta, Ga., which was starting up to sell size to the mills. But what we mean is there were no salesmen or chemists calling on the mills to advise them about such things.

Well, we realized we needed something in the size to keep our warps from getting so dry. So after studying quite a few books on chemistry we decided to experiment with some chlorides, salts, etc. We did improve our end breakage greatly. But the most comical situation developed from an idea we got about wax. (This has been explained on this page before, but it has been quite a few years and therefore may be of interest to younger readers who were not reading OLD-TIMER at that time.)

We knew that a cobbler waxed the thread he sews leather soles on shoes with, to make it stronger. Therefore, we reasoned that if we could use wax as one of the ingredients of our sizing we would add strength to our warp yarns when sizing them. We put the word out to farmers that we would buy beeswax. Boy! it came in balls; it came in dish pans, and every other conceivable way you could think of. They even came to our house with beeswax on Sunday.

We had 400-gallon kettles to make soap and sizings in. We started by putting in four pounds of wax. Then we would take samples of sized warp yarn off at the slasher and give it the usual breaking test—no increase in breaking strength—we put in eight pounds—no increase in breaking strength—we put in twelve pounds—no increase in breaking strength. But by this time the loom fixers and weavers were all commenting on what a big improvement there was in the warps they were getting. They felt so smooth.

Therefore, we continued to use wax in our sizing; the supply of beeswax soon gave out and we used Japan vegetable wax. But OLD-TIMER was not satisfied—he wanted to know why beeswax did not add to the breaking strength of the warp yarn. Well, do you know why? The story is too long to relate in this article, but the overseer of weaving and the assistant superintendent from that mill we started up so long ago, got a good laugh out of the episode.

Then we explained to them the

experience we had in giving a weaver a set of looms in two alleys. We thought this was a great idea at the time because we were giving weavers twenty-four looms, which was more looms than weavers had ever attended before. No, it didn't work; the weavers preferred to have all of their set of looms in one alley.

O. K., then we thought we could devise some other scheme which would save the weaver from walking so much. Twenty-four looms looked like a half acre to us at that time.

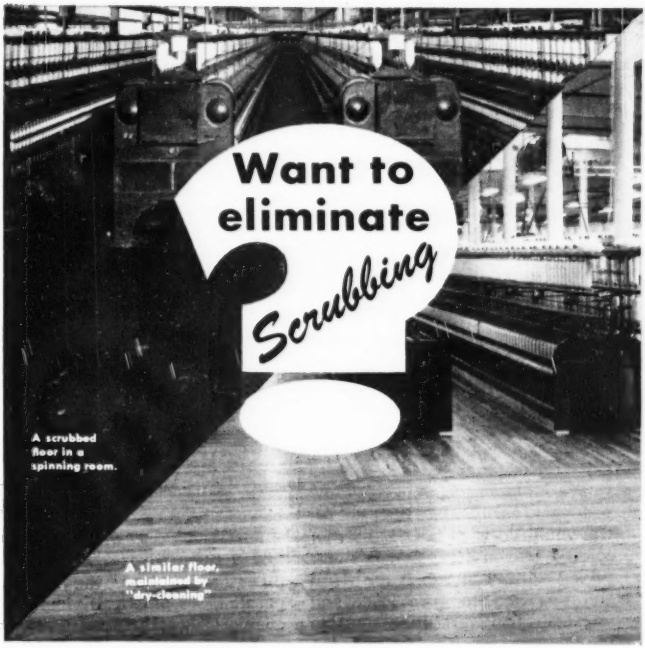
We devised a truck for the weaver to ride on. This truck consisted of a flat body or platform with four grooved wheels resting on a track of half-round iron located in the weaver's alley. On the truck was a revolving stool for weaver to sit on and a filling box to hold spare filling. To propel the truck the weaver merely took hold of the loom and gave the truck a shove down the alley to where a loom was stopped.

It sure looked all right and the weaver liked it, but we soon found that the weavers did not need trucks or anything else. You see, we thought when we put weavers on twenty-four looms that they could not do that much walking. Sounds a little silly now, does it not?

Anyway, we explained to the overseer and the assistant superintendent that the alley where we experimented with the weaver's truck was the fourth alley from southwest side of the second floor weave room in the mill where they both work. The reader can appreciate how interesting these recounters were to two men who were now working in the very mill where the experiences happened and that those things all happened before they were born.

Just how or why we do not recall, but something in the conversation prompted OLD-TIMER to relate an experience he had on 90" looms when making tire fabrics. (That, of course, was before auto tires were made of cord.)

The most expensive trouble tire manufacturers had with processing tire fabric was that it would break or tear at the selvages due to the tremendous tension put on the



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cloth while it was going through the calenders, during the process of impregnating the cloth with rubber. We discovered it was due mainly to the fact the cloth was "bowed" during the process of weaving, and we devised a loom which took the bow out of the cloth, and our mill got a premium for its entire production of 10/4 cloth.

"Took the bow out of the cloth?" asked the assistant superintendent. "What in heck is bow in cloth?"

"All cloth is bowed," we replied. It has been for all the ages the world has been manufacturing cloth. Of course they wanted an explanation.

Oh! my goodness, that is pretty hard to do, unless we were in a weave room where we could show you very easily and quickly. All we would do is to take a piece of colored crayon (crayon you mark roving with) and rub it on a full filling quill. Stop the loom and insert the colored filling quill in the shuttle by hand. Start the loom and run about four to six picks—just sufficient to make a colored stripe across the cloth. When this colored stripe weaves down on the roll of cloth, tear off a strip of cloth about 10" wide with the colored stripe in the center of the swatch of cloth. You will readily see that the colored filling does not lie in a straight line across the cloth.

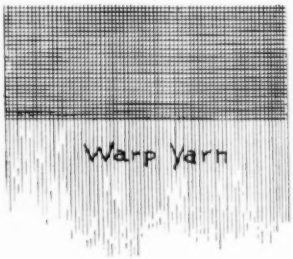
A pick of filling does not lie at right angles to the warp threads. The pick of colored filling is curved as all picks of filling are curved in *all* styles cloth and on all widths of looms. The wider the loom the more pronounced the curve or bow of the filling.

Mr. READER, why don't you make the above colored filling test to see what bowed cloth is? If your loom is on cloth 40" wide, your cloth is bowed.

Just ask your wife if she can fold a sheet squarely, when ironing—that is, have the hems lie parallel. It's practically impossible on most sheets.

Here, hand me a piece of paper from that desk and I will try to illustrate: The filling does not lie in a straight line across the cloth. The filling does not form a line at right angles to the warp as shown on Sketch 1. The filling lies in a

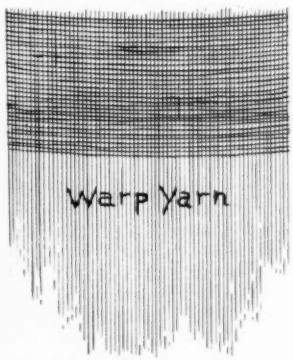
Sketch 1



curve as shown on Sketch 2. This you will see when you run a few picks of colored filling into a piece of cloth.

In all our years and years of ex-

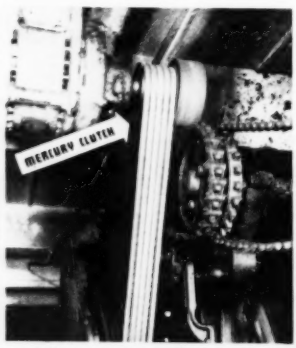
Sketch 2



perience in the textile industry, we haven't found many experienced textile executives who have tried to do anything about this defect in the weaving of cloth. In fact, we have found very few textile men who even know what bowed cloth is.

"Just a minute, OLD-TIMER," the overseer interrupted, "you sure have told us something we did not know about cloth, but you have not told us what is the cause of bowed cloth and whether you have done anything about it or not?"

"You have forgotten, MR. OVER-



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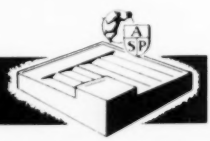


SEER, that in our conversation concerning tire fabric we did tell you that we did something about it, and that we got a premium for our cloth. However, the very next year tire manufacturers began using cord to make automobile tires and our discovery of how to prevent bowed cloth for tire fabric faded out of the picture so far as tire fabric was concerned.

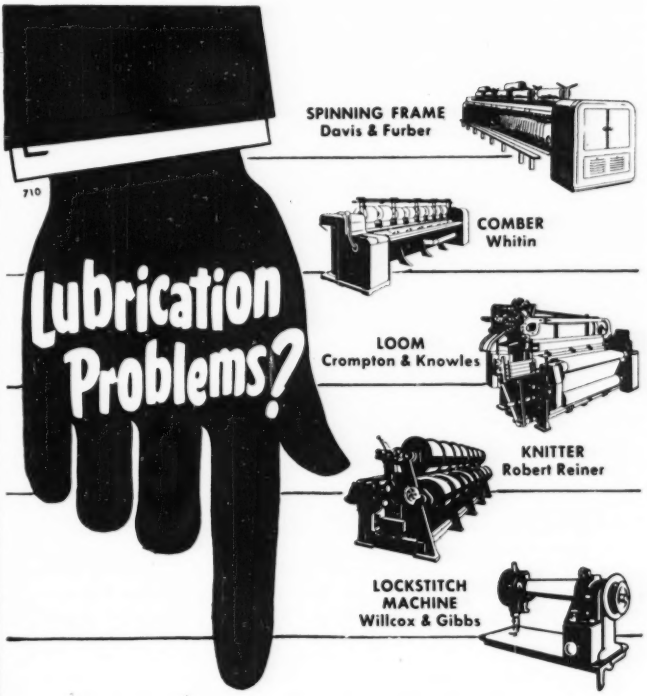
"But you have not explained to us what makes bowed cloth."

"Gentlemen, it is past midnight and an explanation as to why all looms make bowed cloth is quite a long story. Tomorrow, if we can find time and can get together, we will try to find out what makes bowed cloth."

Next day. Well, gentlemen, we have made a rather crude sketch hoping it will help in our explanation as to what makes bowed cloth. Understand, the points we are bringing to your attention are not the sole cause of bowed cloth. In fact, a loom will continue to make bowed cloth when these items are eliminated. What we are trying to explain is that any loom of the conventional type will make bowed cloth, and it takes a change in the conventional type loom to prevent bowed cloth. So far no loom, to our knowledge, will not make bowed cloth. In our efforts in recent years to add more and more to the pounds or yards of warp yarn on the loom beam, we have done several things which cause the cloth to have more pronounced bow.

Most looms have about 10% between the distance of loom beam heads, over the width of cloth the loom is supposed to weave. For example, for a 40″ loom the distance between loom beam heads usually is 44″. We have selected a 40″ loom for our Sketch 3. As the width of most fabrics made on 40″ looms is 39″, we show a 39″ roll of cloth on the loom. Contraction of the cloth from the width of warp yarn in the reed to the width of cloth on the roll is, on most styles of goods, about 5%. Therefore, with 39″ cloth on the roll we will have 41″ width of warp yarn at the reed.

With this picture in your mind, it is not difficult for the practical weaver to realize that the outside



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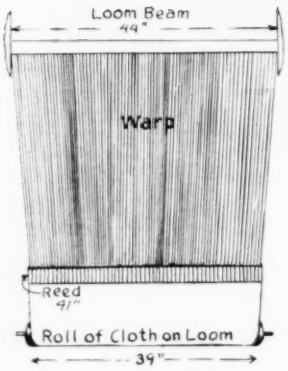
warp ends (ends next to loom beam heads and selvages) are longer than warp ends in the center or middle of the warp and cloth. As all warp ends have tension on them, the warp ends on both sides of the warp will have *more* tension than than those ends in the center or middle of the warp and cloth. By the same token, the warp ends in the center or middle of cloth and warp will have less tension. Then the center of a piece of woven cloth is more slack than the sides.

This tension or slackness is, of course, more pronounced in about 20" of the center of 40" goods (really 39" goods). In other words, the warp ends 10" from each selvage have more tension on them than those warp ends in the 20" in center of the cloth. (10" on each side equals 20" then 20" in the center equals the 40" width of cloth.)

We have found that on many styles of goods there is more warp breakage in the two 10" widths on the two sides of the cloth; less warp breakage in the 20" center of the cloth. You can easily conduct tests for warp end breakage to determine if this condition prevails in your mill. To conduct our end breakage tests we simply marked the hand rail or breast beam 10" from the selvage on each side and let the weaver record the ends which broke in the two side zones and the middle.



Sketch 3

With the space between warp beam heads the same as width of yarn in the reed, we would still weave bowed cloth, but it would not be quite so apparent (not as much bow). And if there was some way to eliminate the contraction from the width of warp yarn in the reed to the width of the cloth on roll at loom, there would be still less bow in the cloth, but there still would be some bow.

"That all sounds very simple, OLD-TIMER," said the overseer, "and we believe we fully understand the explanation you have given us, but not once have you given us any idea as to what you did to a loom to make absolutely 'square' cloth—that is, cloth with no bow in it such as you made for the automobile tire manufacturers."

Gentlemen, the textile show will not last long enough for me to relate to you all we did to our looms to prevent bowed cloth, but patents cover some of them.

We can tell you one of the first things we did to the loom, and it is one of the most important items too, but we are sure you will not agree that it would help stop bowed cloth. In fact, we are sure you will say we are wrong and it should do just the opposite.

So here goes, and see if you do not disagree with me. The first thing we did was to make a concave take-up roll. Yes, we said concave—not convex.

Yes, we explained to you that warp ends in center or middle of cloth (20") are slacker than the warp ends on each side (10" each). Then any one would say that if you want to tighten those ends in center of warp, any boob would know you must have a convex take-up roll. O. K., gentlemen, go ahead and make your convex take-up roll and then you will find out you must make it concave—just like OLD-TIMER told you in the first place. The mechanic we gave the first order to (to make a concave take-up roll for a 10/4 loom) laughed right in our face. But we laughed last. Just remember, it takes a concave take-up roll on a loom to help make cloth without bow and not a convex take-up roll. Why? You answer that one.

Personal NOTES

ABOUT MEN YOU KNOW

Horace Fleming has been promoted to shift supervisor in the carding and spinning department at the Reid Mill of U. S. Rubber Co., Hogansville, Ga.

Kenneth N. Merrill, formerly manager of the firm's New York office, has been elected a vice-president of Abbot Worsted Co.

At the regular directors' meeting **Charles F. H. Johnson, Jr.,** was elected executive vice-president of Botany Mills, Inc. **Harry H. Templeton** was appointed vice-president in charge of manufacturing, and **Paul Priber** was made assistant treasurer.

American Woolen Co. has announced the transfer of **Walter Cummings** from its Sawyer mill to the firm's Baltic mill in Enfield, N. H.

Nelson Barlow succeeds the late Edwin Farmworth as plant manager of Apponaug Co. He was formerly with Verney Corp.

James C. Platt has retired as vice-president and manager of Chicopee Manufacturing Corp. of Georgia.

L. E. Gatlin, Jr., formerly with Dan River Mills, is now manager of Erwin Mills' Neuse (N. C.) plant.

After 41 years of service with the West Point Manufacturing Co., **John H. Hampton,** 66, retired as overseer of spinning of the Fairfax Mill. He was succeeded by **Thomas B. Bramlett.**

Robert E. Gregg was recently elected divisional vice-president of Kendall Mills, the textile division of Kendall Co. He will continue as general sales manager.

Mojud Hosiery Co., Inc., has announced the election as vice-president of **David L. Judson.** He will assume charge of research in merchandising, marketing, and distribution.

Robert Patterson has been made general manager of Holly Knit, Inc., Mount Holly, N. C. For the present Mr. Patterson will make his headquarters in New York, dividing his time between the two cities.

Lionel A. Roberts, with the firm

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Personal NOTES ABOUT MEN YOU KNOW

for the past 18 years, has resigned as vice-president of Valley Lace Co.

Fred Lyon was recently elected president and **Mrs. C. W. Mizell,** chairman of the board, of Opp and Micolas Cotton Mills.

A. LeRoy Lightner has retired from the Narrow Fabric Co., after more than 33 years of service. He was vice-president in charge of sales.

John J. O'Connell has been named vice-president (finance) of the Berkshire Knitting Mills. He has been associated with the company for seventeen years.

James Simmons, overseer of the bleaching department at Riegel Textile Corp., Trion, Ga., was recently presented with the Silver Beaver award by the Northwest Georgia Council of Boy Scouts. It represents the highest honor in adult scouting.

Thomas N. Ingram, formerly with the firm of Bruce Payne and Associates, has been added to the Charlotte, N. C., staff of the American Cotton Manufacturers Institute. Mr.

Mr. Ingram

Ingram will work with member mills regarding all activities in which the organization engages, and will assist in the general operation of the Charlotte office.

Dwight B. Billings was recently elected treasurer of Pacific Mills. He succeeds Henry M. Bliss, who had been both president and treasurer. **Theodore R. Peary** replaced Mr. Billings as secretary.

Laurence C. Plowman, industrial development consultant of Portland, Me., has been appointed vice-president in charge of the industrial building department of Textron Inc. **Joseph F. Merton,** formerly with Deering Milliken & Co., Inc., has rejoined Textron as quality control director for the grey goods division.

Fuller E. Callaway, Jr., formerly president of Callaway Mills, has been elected to the board of directors of Heppenstall Co., Pittsburgh forgings manufacturer.

Eaton B. Lloyd, vice-president in charge of merchandising and sales for Dan River Mills, Inc., has been elected to the firm's board of directors.

P. H. Hanes Knitting Co. has announced the promotion of **Oscar A. Shortt** to director of sales. Succeeding him in his former positions are **Thomas F. Southgate, Jr.,** as sales manager and **Robert T. Bean** as advertising and sales manager.

Claude W. Joiner has been named to the newly-created post of vice-

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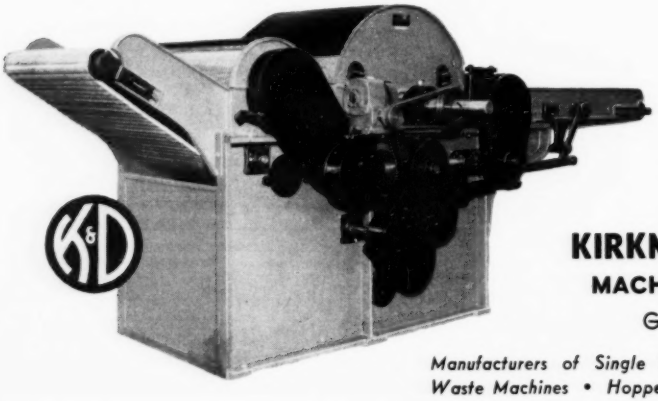

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MACHINERY COMPANY
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president in charge of cotton of Standard-Coosa-Thatcher Co. He was previously manager of the cotton division.

Joseph E. Mee has been made general manager, and **Louis Martinez, Sr.,** superintendent, at John Alden Woolen Mills, Inc., Worcester, Mass.

Charles W. Jones was recently transferred from the National Cotton Council's Memphis offices to Washington as assistant to the Washington representative.

C. W. Loomis was recently elected to the board of directors of Bemis Bro. Bag Co. **F. V. Deaderick**, eastern director of sales, was named a vice-president.

Edwin Wilkinson has been made executive vice-president of the National Association of Wool Manufacturers, succeeding the late Arthur Besse.

Wellington Sears Co. has announced the appointment of **Herbert R. Schwarz** to the newly created position of director of research and fabric development.

A. B. Moss was recently elected a vice-president of Wortendyke Manufacturing Co., Waynesboro, Va. All other officers remain the same.

Sydney Wilson, formerly with the Northboro Woolen Mills, is now with the Worcester (Mass.) Yarn Co.

Obituaries

John C. Turner, 64, southern representative for Charles Bond Co., Durant, and other manufacturers, April 4 at Biloxi, Miss., where he was attending the annual convention of the Alabama Cotton Manufacturers Association.

Charles F. Harry, 66, founder and president of Minette Mills, Inc., of a heart attack.

Frank G. Ahern, 57, president of Ahern Textile Print Co., R. E. Briggs & Co., Inc., and Griswold Textile Co., on March 16.

Nelson M. Smith, 56, retired manufacturing executive and son of one of the founders of Smith, Drum & Co., on March 14.

Howard Marshutz, supervisor of waterproof sales for Bemis Bros. Bag Co., on March 10, of complications resulting from an automobile accident.

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What the TEXTILE MILLS are doing

The Hogansville, Ga., plant of **United States Rubber Co.** recently won the "President's Prize" of $300 in Group A in the company's safety contest for 1951. Awards are made annually to the plants showing the greatest percentage of improvement over their average experience for the three previous years.

Sydney Rosenberg heads **Tam O'Shanter Mills,** Manchester, N. H., now in operation producing knitted sportswear.

Avondale Mills, Sylacauga, Ala., is planning to install an air-conditioning system in its office building at the mill.

An expansion program is under way at **Robertson Fabrics, Inc.,** 222 South Los Angeles St., Los Angeles, California.

The Floyd Mills Division plant of **A. D. Juilliard & Co., Inc.,** located at Rome, Ga., is being closed permanently, according to reports.

Abbott Worsted Co., Graniteville, Mass., has plans for a new plant at Bridgton, Me., to be equipped as a worsted cloth mill.

Two one-story buildings, for warehouse service, are being erected at the **Merrimack Woolen Mills** of **M. T. Stevens & Sons Co.** They will provide a total of 14,000 sq ft floor space.

Lynn Textile Mills, Inc., Holyoke, Mass., have been chartered to take over and succeed to company of same name, operating a silk and rayon fabric mill.

Industrial Hosiery Mills, Inc., Shillington, Pa., have discontinued operations, and the building, machinery, and other equipment are being sold.

The **Vass (N. C.) Cotton Mill Co.** has been purchased by **Textron Southern, Inc.,** and will be used as a spun rayon unit by the new owner.

Controlling interest in **Dorchester Fabrics, Inc.,** Summerville, S. C., has been purchased by A. R. Davis, president, Longleaf Mills, Inc., Matthews, S. C. No change in production has been made.

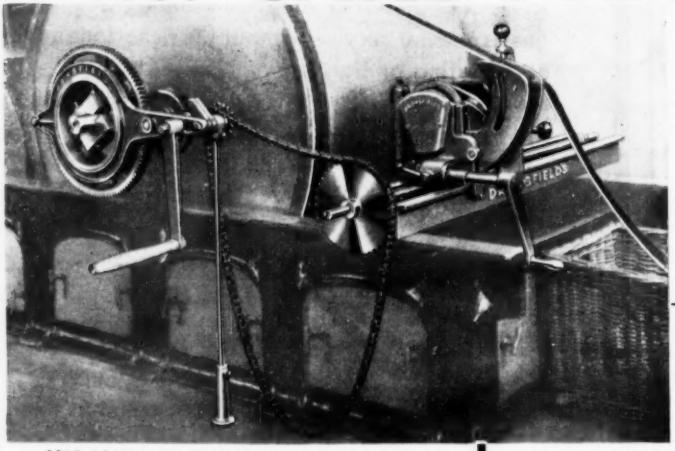
Cobble-Muse Hosiery Mills, Inc., Chattanooga, Tenn., plan construction of a one-story addition to the mill.

Appleton (Wis.) Woolen Mills, Inc., plan construction of an addition to the mill, to be equipped for increased capacity.

Powdrell & Alexander, Inc., Danielson, Conn., are consolidating their local spinning and weaving plants for more economical and efficient operation.

Charles W. Fifield, Jr., is president and treasurer of **Charles W. Fifield, Jr., Co., Inc.,** 72 Lincoln Street, Boston, Mass., recently chartered for manufacture of textile products.

Perfect CARD MOUNTING



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Card Mounting Machine No. 220 with Double Purchase Jack for clothing Card Cylinders and Doffers

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John A. Roebling's Sons Co., Trenton, N. J., has discontinued its woven wire fabrics division, heretofore given over to production of industrial wire cloth, insect screening, etc.

Albany (N. Y.) Felt Co.'s new Canadian plant will be established in Cowansville, Que., in a one-story building to be occupied under lease.

Sol Blackman, 67 West 44th St., New York, N. Y., is representative for **Textile Productions, Inc.,** recently chartered for manufacture of textile products, exact character not announced.

A one-story mill addition is under construction at **Madison Throwing Co.,** for increase in output.

A building in Sinking Spring, Pa., formerly occupied by Howard Hosiery Mills, Inc., has been leased by **Ladd Hosiery Mills, Inc.,** Shillington, Pa. The acquired property will be operated as a branch mill.

A dye and finish mill will be operated by the recently chartered **Barton Yarn Dyers, Inc.,** Pawtucket, R. I. Jacob Goodman, 20 Waltham St., is principal incorporator.

Wamsutta Mills, New Bedford, Mass., have completed arrangements with the officials of Lawrenceburg, Tenn., for construction of a mill to be occupied under long term lease.

Springfield (Tenn.) Woolen Mills Co., Inc., are planning construction of a one-story addition to the mill, for warehouse service.

The Laurens Hospital Authority at Dublin, Ga., has been presented with $35,000 by **Dublin Woolen Mills,** for construction of a modern nurses' home.

Burlington Mills Corp. has announced the transfer of its entire seamless hosiery operation to Harriman, Tenn. Machinery is being moved from the Bur-Mil plant in Montreal, Canada. The firm has also announced that an expenditure of about $148,000 will be made for increased equipment and facilities for testing fabrics for government service.

Alexander Mills, Forest City, N. C., have been presented with a whistle from one of Southern Railway's engines. The Southern for sometime has been donating to churches bells from dead engines, and the railroad recently adopted the policy of giving whistles to textile plants along its lines.

A two-story addition to the **Cross Cotton Mills Co.** plant at Marion, N. C., is now under construction. The first floor is for rewinding and conditioning dyed yarns, the second story for yarn storage.

Delaware Falls Co., Kingstree, S. C., is planning construction of a weaving mill for worsteds, woolens, and "Dacron" fabrics. The cost is reported to be over a million dollars.

To celebrate its 25th anniversary, the **Flagg Knitting Co.,** Florence, Ala., presented to Florence and Lauderdale County an addition to their hospital.

In recognition for continuously maintaining 100% participation in the payroll savings plan during the recent America First Defense bond drive, **Fulton County Silk Mills,** Gloversville, N. Y., won a citation from the United States Treasury Department.

Approximately $500,000 is being invested by **Hoover Hosiery Co.,** Concord, N. C., in the building and

THE "JUNIOR CLEANER"

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Does a "Man-Size" Job!

For use between hopper and conveyor.
Delivers to regular cleaning line.
Completely opens and pre-cleans small amount of cotton delivered to each hopper in battery, so that machines in regular cleaning lines do *more cleaning* with *less staple breakage.*
Requires 43" between hopper and conveyor table.

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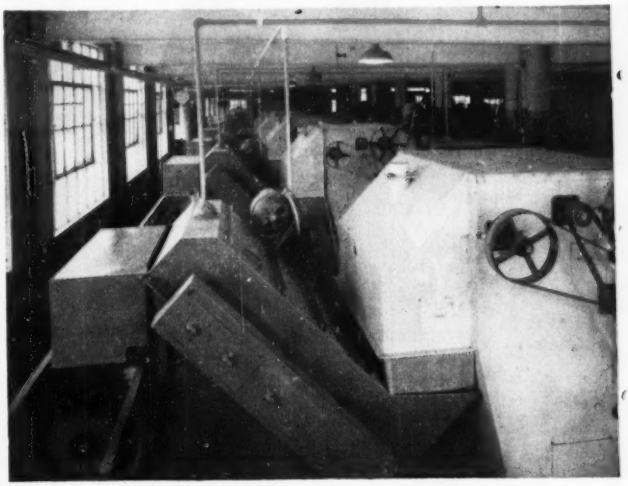

Shown above is a complete installation of "JUNIOR CLEANERS" in opening room of an Alabama mill.

Manufactured by

GASTONIA TEXTILE MACHINERY CO.

GASTONIA, NORTH CAROLINA

What the TEXTILE MILLS are doing

equipping of an addition to its plant. 25,000 sq ft floor space will be provided for a completely modern finishing plant, the advertising department, and the main sales office. The firm's old plant on North Kerr Street in Concord has been sold to the **Oscar Heineman Corp.**, of Chicago, Ill., which plans to install new throwing equipment to produce high quality hosiery and tricot knitting yarns.

Illinois Knitting Co., Mount Vernon, Ill., is engaged in reorganization and modernization of its production facilities, and is adding knitted infants' apparel to its line. This segment of the business will operate under the name of **Mount Vernon Textile Co.**

The main full-fashioned plant of **Standard Hosiery Mills, Inc.**, at Alamance, N. C., is being expanded for installation of new long-section machines, according to reports. The new addition will contain approximately 8000 sq ft floor space.

Contract has been let for a one-story addition to the Atco, Ga., mill No. 3 of **Goodyear Clearwater Mills.**

Duplan Corp. will move its offices from Hazleton, Pa., to Charlotte, N. C., where all operations will be concentrated.

Industrial property and a building at Connellys Springs, N. C., have been purchased by **Hickory (N. C.) Spinners, Inc.**, and a branch mill will be established there, according to reports.

Alterations and improvements in Mill No. 6 of **Durham (N. C.) Hosiery Mills, Inc.**, are planned.

A one-story building, recently purchased by **R. & S. Hosiery Co.**, Hendersonville, N. C., is being equipped for the manufacture of full-fashioned hosiery. An output of about 800 dozen pairs per week is expected.

Aberfoyle Manufacturing Co., Philadelphia, Pa., has plans for expansion of operations at its plant near Belmont, N. C. It is expected that similar expansions will be carried out in other mills of the company.

Jackson Mills, Wellford, S. C., have plans under way for an addition to the office building at the mill.

An expansion program, including construction of one or more additions and installation of extra equipment, is planned by **Brookside Mills, Inc.**, Knoxville, Tenn. The program is reported to cost more than $2,000,000.

The **University of Tennessee's** board of trustees has authorized a new laboratory, to be equipped as a cotton spinning unit for research and experimental work.

A cotton mill at Strasburg, Va., will be operated by the recently organized **Melvyn Spinning Corp.** David Wiener is president.

Marion Mills, Allentown, Pa., will occupy under long term lease a one-story building at Hamilton, Ala., now under construction. The cost is reported to be about $300,000.

The **William Whitman Co., Inc.**, top mill at Lawrence, Mass., has been sold to **Marriner & Co., Inc.**, of Boston.

BLACKS

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SUPPLIERS News

WHAT THEY ARE DOING

Plastex Products Co., Marietta, Ga., has been established to manufacture rubber products from natural and synthetic latex and from vinyl plastic resins. R. T. Henson is president of the new firm, and Clyde Wilkins, Jr., is vice-president and sales manager.

American Aniline Products, Inc., has announced the appointment of Herman P. Baumann as technical director of the firm's Metropolitan

Mr. Baumann

Application Laboratories at 116 Washington Ave., Hawthorne, N. J. Mr. Baumann was formerly with Allied Textile Printers and the United Piece Dye Works.

Jack Davis, formerly with Callaway Mills Co., has joined **Chemstrand Corp.** in Decatur, Ala. Mr. Davis will be connected with the research and development department.

Charles N. Knapp has left General Electric Co. to become associated with **Butler Manufacturing Co.** as vice-president and general manager.

Alexander Associates, Philadelphia, Pa., have opened an office at 230 North Fifth St., Reading, Pa. R. David Wood is in charge.

A newly organized apparatus department at **Allis-Chalmers Manufacturing Co.** will be under the direction of J. D. Greensward. The Texrope drive and pump department, under the continuing management of T. C. Knudsen and H. P. Binder, respectively, become sections of the new department. Mr. Greensward continues as general manager of the firm's Norwood Works.

John E. Clinkosky is now eastern zone manager for the Mercury Clutch

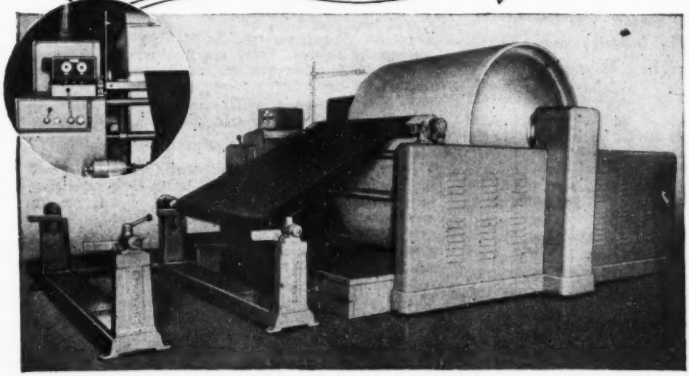
Mr. Clinkosky

division of **Automatic Steel Products, Inc.**, Canton, Ohio. Mr. Clinkosky

Do Your Semi-Decating By Sets on Gessner's NEW 60" Versamatic

WOOLENS AND WORSTEDS All of the features of quality decating made famous by the 36" machine, are present in this new Gessner 60" Versamatic — but at DOUBLE the rate of production. You can decate from 6 to 8 pieces of woolen or worsted — evenly and uniformly throughout every piece. Unique hydraulic drives and apron guide mechanisms keep the apron running smoothly and without undue tensions at a speed never before attained.

RAYONS AND SYNTHETICS 1,000 yards and more of rayon or synthetics may be decated on the Gessner 60" Versamatic at a single loading.



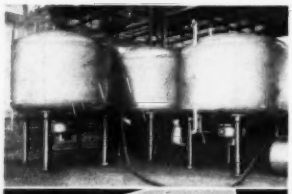
Gessner's new 60" Versamatic Decating Machine (insert) Hydraulic drive controls and apron guide mechanisms

DAVID GESSNER CO.

Canadian Representative: W. J. Westaway, Montreal, Quebec; Hamilton, Ont.

Gessner Improved Cloth Finishing Machines maintain a standard of performance to meet the exact requirements of your cloth finishing.

98 YEARS OF EXPERIENCE IN BUILDING TANKS



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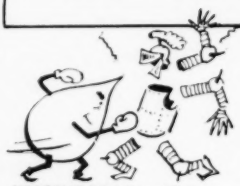

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Most powerful iron complexing agent known in normal pH range.

VERSENE*
Most efficient general complexing agent. Softens water completely and permanently without precipitation.

• • THE *Versenes*

VERSENE T*
Prevents and removes iron deposits from fabric treated with concentrated caustic.

VERSENE FE 3*
Prevents hard water deposits and iron stains.

VERSENES AND TEXTILES

The Chas. S. Tanner Company, as Southern Agents for the Bersworth Chemical Co., now offers you the Versenes in the South. By controlling metallic contamination, these most modern of chemicals give *cleaner* fibres, *softer* woolens and visibly *whiter* cottons. Among other things, they completely soften hardest water without precipitation.

OTHER TANNER CHEMICALS

Suedex Series.
These Resin Emulsions are semi permanent and easy to use in process finishing. Color yield is excellent and they give varying degrees of stiffness, fullness and finish on broadcloth and cottons of 80 squares.

Crystal Film.
These are Co-polymer type resins. They give beautiful transparent finishes. There are four types. Similar to Suedex in function but are used where even finer finishes are desired.

Ether Gum Binder.
For all types of clay or talc fillers for cotton goods. Non-yellowing properties.

Tantex A and Tantex B.
The *Durable* Type Water Repellent. Cottons treated the single bath Tantex way will retain their repellency for 3 washings or 3 dry cleanings. It will pay to investigate.

CST Gum No. 5.
A weighter type material. Used as a finish but imparts much weight to the fabric.

Tanamine Series of Softeners.
This is a complete line of cationic, anionic and nonionic softeners.

*T.M. Bersworth Chemical Co.

CHAS. S. TANNER CO. *manufacturing chemists*
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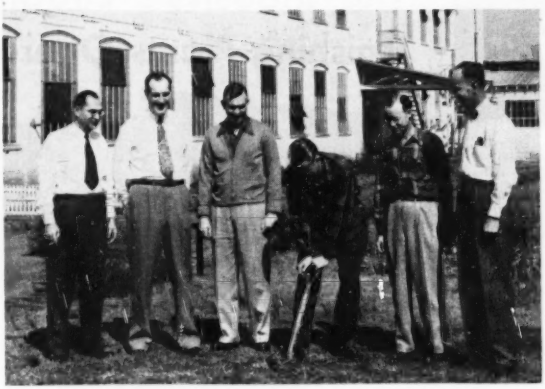

Southern States Equipment Corp. Expands Facilities

Shown here taking part in the ground-breaking ceremony for a new 25,000 sq ft addition to present facilities of Southern States Equipment Corp. in Hampton, Ga., are (left to right): C. W. Walter, sales manager, mechanical division; W. C. Mitchell, vice-president; Glenn Mitchell, production manager; Olan Richardson, president; T. E. Curtis, chief engineer, electrical division; and T. A. Burdeshaw, sales manager, electrical division.

SUPPLIERS News — WHAT THEY ARE DOING

Dexter Chemical Corp. has announced the appointment of Joseph B. Evans, director of sales, to the regional advisory committee, Small Defense Plants Administration. The firm has announced also the acquisition of Lake Chemical Corp., including rights to all former Lake trademarks and trade names. Al Rappaport, eastern sales manager for Lake,

Mr. Rappaport

will be retained by Dexter as sales representative in New York City.

will supervise the New England, Middle Atlantic, and South Atlantic territories. He was formerly with Centric Clutch Co.

In honor of its 50th anniversary, **Toledo Pipe Threading Machine Co.**, Toledo, O., has prepared "The Toledo Story," a brochure which has been sent to distributors and jobbers for mailing to their customers. William Vosper, chairman of the board and one of the founders, 50 years ago invented a pipe tool employing the receding die principle, which led to the formation of the company.

Before the end of 1952 **Ciba Co.** is expecting to have in operation its Toms River vat dye plant, now nearing completion.

Jess B. Kilpatrick, formerly with Dunean Mills, has been appointed representative for **Morris Fur Co.**, Burlington, N. C. His territory will include the states of South Carolina, Georgia, and Tennessee with headquarters in Greenville, S. C.

Harry K. Collins, formerly with General Electric Co., has joined the **Continental-Diamond Fibre Co.**, as director of manufacturing.

if your weaving operation is on this list . . .

- Bedspreading
- Corset Fabric
- Cottons
- Damasks
- Duck
- Elastic
- Fibre-glass
- Flannels
- Novelty Fabrics
- Rayons
- Silks
- Terry Towelling
- Tie Silks
- Upholstery
- Woolens
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You will trim selvage threads faster and cut your inspection costs with the Individual Selvage Trim-Master. Can be installed easily adjacent to any standard inspection frame or winding device. Close up above shows Trim-Master head past which cloth flows.

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By every yardstick these "jewels of perfection" measure up to the highest quality standards. The absolute uniformity of weight, temper and shape of CARTER TRAVELERS is scientifically controlled by a modern metallurgical laboratory.

That means smooth running work, long trouble-free performance and less wear on expensive rings.

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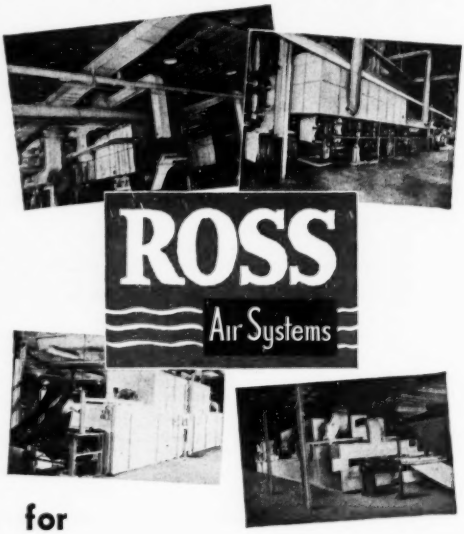

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Each new installation of the modern ROSS Air Systems throughout the textile industry further testifies to their effectiveness in achieving greater production efficiency and operating economies. They are fast becoming standard equipment for confining and removing vapors, to speed drying, to prevent spoilage from condensation, to eliminate fog, to provide comfortably cooled working areas and similar requirements. Investigate the possibilities for your plant.

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Fully illustrated, it describes ROSS Systems for various departments.

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SUPPLIERS News
WHAT THEY ARE DOING

The Charlotte, N. C., district office of **American Viscose Corp.** has announced the appointment of Norman A. Cocke, Jr., as assistant district sales manager, and Masten R. Dalton as district head of staple sales. American Viscose has established a new sales division to handle distribution of rayon tire yarn, tire cord, and tire fabric, with Frank T. Williams heading it.

Eben F. Potter was appointed manager of **J. S. Fallow & Co.'s** new office at 4846 Sherbrooke St., West,

Mr. Potter

Montreal, Quebec. Fallow represents **Charles B. Johnson Machine Works** in New England and Canada.

Scher Bros. have announced that their increased laboratory facilities and equipment make possible more comprehensive research, development, testing, and production of dyestuffs and textile finishes.

P. A. Bell has been made district manager industrial sales in the New England area for the **Baldwin Hill Co.** Mr. Bell will operate from the sales office at 500 Fifth Ave., New York City.

Robert Strasser has been elected executive vice-president; Joseph C. Blauvelt, Sadie Feldman, and Daniel H. Lipman, vice-presidents; and Ernest Rusch, assistant vice-president, of **Stein, Hall & Co., Inc.** Lawrence Gussman, vice-president, has been elected president of The Stein-Davies Co., a manufacturing subsidiary.

William J. Carlin has joined the fatty acid sales staff of **W. C. Hardesty Co., Inc.** He was previously with E. F. Drew & Co.

Herbert A. Fox, previously project engineer, has been named technical manager of the Fiber Glass division of **Libbey-Owens-Ford Glass Co.**

The John Hewson Co., New York, has opened offices in the National Bank Building, Ambler, Pa. Frederic T. Hults is district manager for the area comprised of eastern Pennsylvania, Delaware, and southern New Jersey.

Dr. Lyman E. Fourt was recently appointed manager, physics research, of **Harris Research Laboratories.**

John L. Stickley Co., Charlotte, N. C., has been named sole sales representatives in the South for **Nichols and Co., Inc.,** Boston, Mass.

Holyoke Machine Co. has announced the election of the following directors: Archie Burack, Industrial Buildings Corp.; Leon R. Cohen, Vanguard Corp.; Thomas E. Clark, United States Rubber Co.; Nathaniel M. Harvey, of Harvey & Mulcare; Edwin F. Greene, Aspinook Corp.; Irwin Sagalyn, Holyoke Machine Co.; Julian L. Sagalyn, Industrial Buildings Corp. Richard H. Dexter has been named a sales engineer for the Water Filtration Equipment division; Frank S. McQuillan, formerly with Textron Inc., will service the textile industry for the calender roll division.

Robert E. Brooks, formerly with American Sugar Refining Co., is now senior industrial sales representative at the New York office of **A. E. Staley Manufacturing Co.**

Lewis W. Thomason, Jr., succeeds the late Falls L. Thomason as south-

Mr. Thomason

ern district manager of **New York & New Jersey Lubricant Co.** He was formerly with Cannon Mills.

Whitin Machine Works have acquired that portion of the Howard & Bullough American Machine Co. re-

17th

SOUTHERN TEXTILE EXPOSITION

October 6-11, 1952

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An opportunity to become acquainted with the latest developments in machinery, equipment, accessories, supplies, and techniques relating to the textile industry.

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Keep ahead of your shuttle needs with a continual check on your shuttle inventory. Time is needed for Watson-Williams to give you the dependable shuttle that meets YOUR exact requirements. Therefore, order well ahead of time so that we can maintain your shuttle deliveries.

Watson-Williams will continue to supply you with quality shuttles as quickly as possible — shuttles with the latest improvements — to increase your production and cut down your weaving problems.

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Watson & Desmond, Box 1954, Charlotte, N. C.
Arthur J. Bahan, 810 South Carolina National Bank Bldg., Greenville, S. C.
John Wyatt, Jefferson Bldg., Greensboro, N. C.
NORTHERN REPRESENTATIVE:
Guy C. Burbank, 32 Beaconsfield Rd., Worcester 2, Mass.
WESTERN REPRESENTATIVE:
Francis B. Wells, 805 Linwood Avenue, La Porte, Indiana

lating to their manufacture of textile machinery and repair parts, H & B having left the textile field. The Whitin-Schweiter automatic filling winder will henceforth be built at Whitin's shops in Charlotte, N. C.

Robert C. Becherer, executive vice-president, and William J. Kelly, president of Machinery & Allied Products Institute, have been added to the board of directors of **Link-Belt Co.**

Donald B. Stroud, formerly in the Cincinnati district offices of **Reliance Electric and Engineering Co.**, has been transferred to Indianapolis as resident engineer.

Dr. John Gaillard, mechanical engineer on the staff of the **American Standards Association** and lecturer in industrial standardization at Columbia University, will hold his next five-day seminar for men in industry June 23-27 in the Engineering Societies Building, 29 West 39th St., New York City.

A new web coating research and development laboratory has been opened by **Industrial Ovens, Inc.** The laboratory is equipped with a complete pilot plant coating unit which can process textiles, papers, films, and foils through all methods of coating and impregnating.

Worthington Corp. is the new name for Worthington Pump and Machinery Corp., changed because of the firm's current diversified manufacturing activities. C. K. Hood, formerly manager of the corporation's New York sales office, has been made a vice-president. W. J. Van Vleck, now in the Atlanta sales office, succeeds Mr. Hood in the New York district office. C. W. Kramer moves from Birmingham to Atlanta. I. W. Leggett, general line salesman at Charlotte, is now manager of the Charlotte branch office.

Allen Latham, Jr., has been elected a vice-president of **Arthur D. Little, Inc.** He will continue as technical director of the mechanical division. Leroy F. Marek, now on the board of directors, will have charge of technical operations of the company.

Dr. Louis Fernandez, of the research department of **Monsanto Chemical Co.'s** phosphate division at Anniston, Ala., has transferred to the division's technical sales department. He will specialize in sales problems related to the formulation and application of synthetic detergents. Frank C. Donofrio has been appointed a textile chemical sales engineer for the company's Merrimac Division.

Frederick S. Waite, plant superintendent for the past two years, has been made sales manager of **William Allen Son's Company.** He will have

Mr. Waite

direction of sales of the firm's products of textile and paper mill equipment, as well as specially engineered fabrications for chemical and other fields.

Hemphill Company has announced the election of James McDowell to

SUPPLIERS News — WHAT THEY ARE DOING

the newly created office of vice-president in charge of the company's southern territory. Mr. McDowell will continue to operate from the company's offices and showroom in the Security Bank Building, in High Point, N. C. New vice-president in charge of research and development is Eugene St. Pierre, who joined the company as an apprentice in 1915.

B. H. Bristow Draper, treasurer and a director, has resigned from active duties in **Draper Corp.** Claude F. Snider, secretary and a director, succeeds him. Mr. Draper will continue as a director.

E. I. duPont de Nemours and Co., Inc., has announced the appointment of Dr. Albert F. Smith as director of the Carothers Research Laboratory of the Textile Fibers department. Dr. Charles H. Arrington, Jr., succeeds Dr. Smith as a research supervisor in the chemical department.

WOODBURY BOX CO.

WOODBURY, GA.

Announces Appointment of

ODELL MILL SUPPLY CO.

GREENSBORO, N. C.

(N. C.-S. C.-Va.)

and

GREENVILLE TEXTILE SUPPLY CO.

GREENVILLE, S. C.

(N. C.-S. C.)

In Addition to Present Representatives

INDUSTRIAL SUPPLIERS, INC.

LaGRANGE, GA.

(Ga.-Ala.-Tenn.)

to sell their line of superior

LOOM BEAM ● BLEACHERY SHELLS

SHELL CLOTH ROLLS

Complete FACTORING Service

Next door to every MILL in the SOUTH

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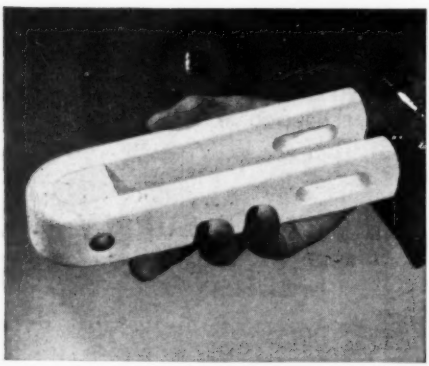
ATLANTA, GEORGIA

Presenting the HARRIS "Heavy Duty" Lug Strap



Pick Arm Lug Straps
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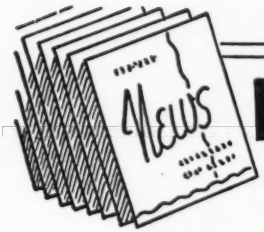

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This service is restricted to those engaged in operation and management of textile industries.

5-1. What's a Silicone? This question is asked of men who sell the Silicones half a million times a year, more or less, and for every time the question is asked a different and partly correct answer could be given. You can describe an unknown quantity only in terms of what it does, and that's what happened when Dow Corning undertook to write this 32 page booklet. You will find this booklet, both pleasant and profitable to read. Dow Corning Corporation, Midland, Michigan.

5-2. Static Control. Copies of a technical paper presented to the American Association of Textile Chemists and Colorists entitled "Static Problems and Their Control in the Textile Industry," is now available. The paper analyzes how static cuts production, impairs quality of product, and causes expensive waste. Specific recommendations as to the most effective method or methods of control are made. The John Hewson Company, 106 Water St., New York 5, N. Y.

5-3. Parks Parables. The latest issue of "Parks Parables" gives the why and where information on the Gradumatics system of humidification, which continues to create interest since its introduction at the Atlantic City Exposition in May of 1950. Well illustrated and a full discussion on this system of humidification. Parks-Cramer Company, Fitchburg, Mass.

5-4. Peroxygen Compounds. A new booklet on "Modification of Wool by Peroxygen Compound" gives both an over-all picture and a detailed explanation of the actual and potential uses of peroxygen compounds in four types of wool processing. Becco Sales Corporation, Station B, Buffalo 7, N. Y.

5-5. Combustion Control. A detailed account of tried-and-proved automatic combustion control techniques for oil and gas fired boilers is now available in a 24 page tri-colored bulletin No. 1023. Illustrates and describes nine typical firing methods and 16 major control equipment components along with individual facts and figures on 300 installations throughout the United States. Bailey Meter Company, 1050 Ivanhoe Road, Cleveland 10, Ohio.

5-6. Stroboscope. New booklet now available describes the complete line of General Radio Stroboscopes, with an explanation of how the stroboscope works. Specific applications of the different instruments with detailed specifications and prices, along with pictures showing how the stroboscope can help you check and analyze production machinery. General Radio Company, 275 Massachusetts Ave., Cambridge 39, Mass.

5-7. Plant Maintenance. New edition of the "Oakite Plant Maintenance Digest" describing specialized materials and procedures that help simplify 54 cleaning and related operations in factories and mills. The careful selection of the correct material for each operation is stressed, as well as determining the most efficient method of application. Oakite Products, Inc., 126C Rector St., New York 6, N. Y.

5-8. Modern Lighting Maintenance. A new 12-page, two color bulletin, "The Why, When and How of Modern Lighting Maintenance," emphasizing the high cost of low lighting maintenance standards and stressing the point that planned maintenance of both light sources and reflecting surfaces saves costly time and useful light. Sylvania Electric Products, Inc., 60 Boston St., Salem, Mass.

5-9. Magnetic Tools. Catalog M-30, the first of its kind, presents illustrations, specifications and price of sixteen standard, hand-operated permanent-magnet tools. Several products are entirely new and previously unannounced. Designed to be a file reference for the tool buyer, master mechanic, plant engineer and superintendent, it includes tools for handling salvaging, sorting, cleaning etc. Magnetool Div., Multifinish Mfg. Co., Dept. 534 2114 Monroe, Detroit 7, Mich.

5-10. Power Drives. A new 20-page comprehensive catalog of Sterling Electric Power Drives contains complete information on variable speed drives, geared motors and constant normal speed motors in drip-proof, splash-proof, totally enclosed and pipe ventilated designs. Sterling Electric Motors, Inc., 5401 Anaheim-Telegraph Road, Los Angeles 22, Calif.

5-11. Instrumentation Fundamentals. The "Fundamentals of Instrumentation for the Industries" is the title of booklet which consists of 126 pages, and covers the fundamentals of measurement control and transmission of variables encountered in industry. Typical applications discussed and many pictures of these applications included. Minneapolis-Honeywell Regulator Company, Brown Instruments Division Wayne and Windrim Ave., Philadelphia 44, Pa.

5-12. Casters Are Important. Brochure discusses the fact that Textiles ride on casters, and the advantages offered by this company who, according to the brochure, are the only exclusive Textile caster manufacturer in America. Cutaway diagrams illustrate these casters and the advantages are fully described. Wilkin & Matthews, 2511 Wilkinson Blvd., Charlotte, N. C.

5-13. Controlled Volume Pumping. A new 24-page bulletin describes Lapp Insulator Company's line of Pulsafeeder piston-diaphram pumps. The feature of "no stuffing box" is stressed throughout the bulletin, and it is noted that Pulsafeeder, although basically a pump, will do the work of a chemical feeder, a meter, an instrument, a filling machine, a proportioner and a sampler. An imposing list of chemicals handled emphasizes its versatility on hard-to handle chemicals. Lap Insulator Co. Inc., Process Equipment Div. LeRoy, N. Y.

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Style 2500 • PROTECTS FEET • SAVES MONEY

Water and chemicals rot out leather soles and injure worker's feet. The light-weight close-grained maple soles on Stahmer Dye House shoes give protection plus comfort. The sanded sole is formed to fit the foot for walking ease. Heavy tanned-leather tops are double stitched and riveted at points of strain. Stahmer's patented coppered wire holds the leather uppers securely to the wooden soles. Oil grained vamps are made extra full. Protect your worker's feet. Use Stahmer Dye House Shoes—famous for over 50 years in the textile industry. You'll cut down accidents for wooden soles prevent slipping. Buy direct from the manufacturer. Sizes 5 to 12. Larger available if necessary.

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Metal rail on sole for longer wear and non-slip optional.

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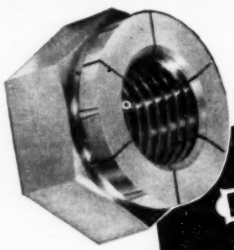

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Write for descriptive literature and samples. We'll be glad to supply you with a quantity for test purposes, although the Government has pre-empted almost all of our output. STANDARD PRESSED STEEL CO., Jenkintown 34, Pennsylvania.

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GENERAL, ECONOMIC, MANAGEMENT

4 HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., 2 Park Ave., New York City.

7 RAYON TELLS ITS STORY TO THE PUBLIC—Folder containing reprints of advertisements explaining some of the many roles in which rayon is serving the American public. — AMERICAN VISCOSE CORPORATION, 350 5th Ave., New York 1, N. Y.

12 CONDENSED LISTINGS—8 page pocket sized booklet listing by plan flow the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASERICK & CO., Boston, Mass.

16 TEXTILE RESEARCH — Booklet describing Research Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and function of department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., 350 Fifth Ave., New York, N. Y.

22 THE WONALANCET WAY—Is the title of an editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written. —WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

PLANT AND PLANT MAINTENANCE

107 FINNELL SCRUBBERS — Illustrated leaflets describing and giving specifications for the Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart, Ind.

111 INDUSTRIAL FANS—Catalog sheets with specifications describing the complete line of Murray Industrial fans for plant ventilation. Seven sizes described from 24" with ⅛ HP motor delivering 5700 CFM to 54" with ¾ HP delivering 17,386 C.F.M. with advantages of heavy gauge metal construction brought out.—H. C. BIGLIN CO., 177 Harris St., N.W., Atlanta, Ga.

113 COTTON MILL EQUIPMENT—This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

117 CLEANING SYSTEMS—Booklet entitled "Certified Climate and Cleaning Systems" gives latest information on system. Products and uses fully discussed with two story layout of Certified Climate central station air conditioning system.—PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

121 STEAM GENERATORS — Bulletin P-1 describes compact package type boiler for heating, power, or processing. Described as fully automatic, firing all liquid or gaseous fuels.—THE CYCLOTHERM CORP., Oswego, N. Y.

127 SOLENOID VALVES — Bulletin "V" lists sizes from ½ inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats, three way solenoid valves, etc.; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

129 AIR CONDITIONING AND HUMIDIFICATION—Catalog section 101 lists and briefly describes each item of the complete Bahnson line of equipment for textile mill air conditioning and humidity control.—THE BAHNSON COMPANY, Winston-Salem, N. C.

132 SANDING AND FINISHING—With Coated Abrasives, 88 page illustrated booklet on modern production methods, including information on the use of "Texalox" Cloth take-up roll covering and Fillet Cloth for sharpening card cloth.—THE CARBORUNDUM CO., Niagara Falls, N. Y.

138 METAL CONVEYOR BELTS—Recent catalog describes and illustrates Ashworth's entire range of manufacture, including the new Flat Wire Belt design and application, along with their woven wire constructions and Positive Drive Chain Edge belts.—ASHWORTH BROS. INC., Metal Products Div., Fall River, Mass.

147 HEATING AND AIR CONDITIONING CONTROLS—Bulletin F-2287-3 describes and illustrates automatic electric controls for heating, ventilating

ORIGINAL and GENUINE "The Leather with the Heart on"
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REG. U. S. PAT. OFF.

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cost slightly more than ordinary leather ---are *worth* infinitely!

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Harness Straps	Twister Cots	Valve Leather
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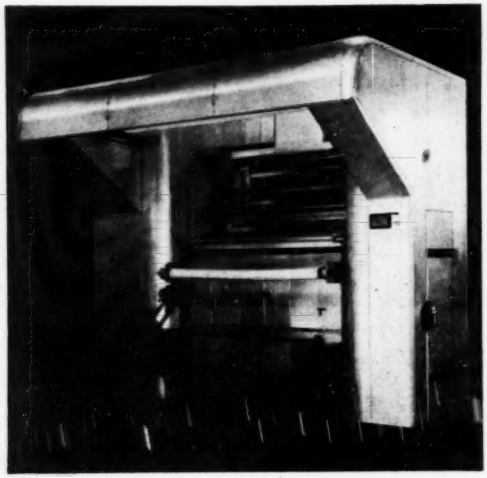

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A heat-reflective enclosure aids in maintaining greater uniformity and thermal efficiency. Exhaust gases are continuously withdrawn from each cylinder. Cylinder bearings operate at room temperature, while cylinders are functioning at full heat. Micro-grooved roll surfaces reduce filling shrinkage.

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The "NATIONAL" Nylon Heat Setting Machine is designed for continuous feed; a wide range of variable speeds; and operating temperatures to 500°F. and higher. It is of rigid, durable construction, with every detail meeting the highest standards for quality and reliability.

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173 **BLOWERS AND EXHAUSTERS**—Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

181 **AIR FILTRATION**—Bulletin 234 describes and illustrates the Auto-Airmat, which is the Automatic Dry-Type air filter. Principle of operation, performance characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

192 **ELECTRONIC HUMIDITY CONTROL**—Bulletin F-5090 gives specifications, detailed control description, installation diagrams, and comprehensive illustrated data on a "package" unit for electronic control of humidity in Textile mills.—BARBER-COLMAN CO., Rockford, Ill.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION

201 **V-BELT DRIVE CATALOG**—This handy, pocket-sized catalog helps you make quick and easy selections of any Dayton V-Belt Drive from 1 to 1000 h.p. Contains many concise, accurate drive tables, diagrams, and other important engineering data.—DAYTON RUBBER CO., Dayton, Ohio.

202 **RELIANCE MOTOR**—Bulletin C-130 on the explosion-proof, corrosive-resisting a-c motor. Design features exclusive with the new motor are connected and illustrated in the bulletin.—THE RELIANCE ELECTRIC & ENGINEERING CO., 1076 Ivanhoe Road, Cleveland, Ohio.

203 **TREADED LEATHER BELTING**—This 16-page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section.—E. F. HOUGHTON & CO., 303 West Lehigh Ave., Philadelphia, Pa.

210 **MOTOR BEARINGS**—The 1952 edition of Johnson's Industrial Bearing Catalog is now available. Shows several new motor bearings added, along with the standard stock sizes.—JOHNSON BRONZE CO., New Castle, Pa.

212 **GATES TEXTILE ACCESSORIES**—Handy pocket-size catalog BHM-7, fully illustrated, gives specifications of Gates textile accessories including pickers, lug straps, check straps, cone belts, evener belts, harness straps, take-up roll covering, and others.—THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

216 **LEATHER BOOKLET NO. 202**—Attractive book illustrating and describing BONDARON Special Tanned Leather as used in various forms such as Check Straps, Solid Round Leather Belting, Flat Belting.—CHAS. BOND CO., 617 Arch St., Philadelphia, Pa.

223 **ELEVATOR SELECTION**—How to integrate the selection of freight elevators with the material handling problem answered in 44-page booklet B-4402 on freight elevators.—ELEVATOR DIVISION, WESTINGHOUSE ELECTRIC CORP., P. O. Box 868, Pittsburgh, Pa.

234 **CENTROILER SYSTEM**—Bulletin No. 802 describes the Lincoln CentrOiler system which is described as a manually operated centralized lubrication system for all machines requiring oil lubrication.—LINCOLN ENGINEERING CO., 5701 Natural Bridge Ave., St. Louis 20, Mo.

257 **ONE-SHOT LUBRICATION OF TWISTER AND SPINNING FRAME**—Illustrated booklet telling how Saco-Lowell builds in the Bijur central oiling system to boost production output and cut maintenance costs.—BIJUR LUBRICATING CORP., Rochelle Park, N. J.

258 **VARIABLE SPEED DRIVES**—Condensed catalog G-509 explains the operation of Reeves Variable Speed drives and contains representative rating and dimension tables for Variable Speed Transmissions, Vari-Speed Motodrives, and Vari-Speed motor pulleys.—REEVES PULLEY CO., Columbus, Ind.

264 **BALL BEARINGS FOR TEXTILE INDUSTRY**—A new loose-leaf catalog illustrating, describing and listing all special ball bearings developed for textile use. New Departure, Division of General Motors Corp., —Bristol, Conn.

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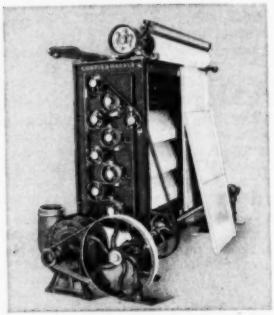

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290 **MOYNO "PROGRESSING CAVITY" PUMPS**—Bulletin 30-A describes the adaptability of these pumps to handling dyes, acids, sizing, and other materials used in textiles.—ROBBINS & MYERS, Pump Div., Springfield, Ohio.

INSTRUMENTS, STEAM SPECIALTIES

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324 **STROBOTAC**—Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

327 **PRESSURE REGULATORS**—Bulletin P-100 describes equipment for slashers to provide squeeze roll pressures that can be easily adjusted to the correct value for any warps being sized.—NORCROSS CORP., Newton, Mass.

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CARDING, SPINNING, WINDING

400 **THE TRAVELER**—Booklet on ring travelers published quarterly with a technical article on spinning and twisting of interest to mill men.—VICTOR RING TRAVELER CO., Providence, R. I.

401 **LUMMUS DUSTLESS, STEEL BLENDING FEEDERS**—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

403 **WINDING MACHINES**—Principles and Practices—This series available in booklet form for those in the industry who desire copies.—UNIVERSAL WINDING CO., Providence, R. I.

409 **ROTO CONER**—Bulletin describing Universal rotary traverse winder, known as the Roto Coner, producing open wound cones or knitting and warping; parallel tubes for package dyeing, twisting, and sale yarn.—UNIVERSAL WINDING CO., Providence, Rhode Island.

414 **WORSTED SPINNING**—Bulletin explaining and illustrating Saco-Lowell's new system for worsted spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

418 **PACIFIC CONVERTER**—Graphic description of machine that cuts any synthetic tow; and when desired, blends it with wool or staple sliver, keeping the fibers parallel, and issuing an even sliver of accurate blend.—WARNER & SWASEY CO., Cleveland, Ohio.

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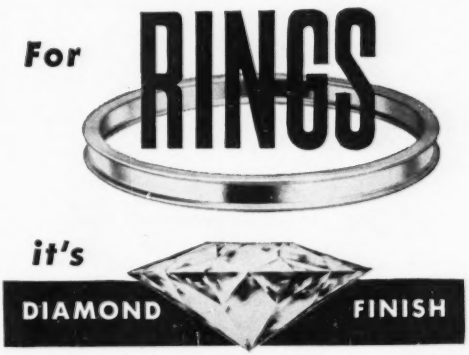
425 **HANDY REFERENCE TABLES**—Folder showing spinning traveler speeds, sizes of ring flanges, etc.—VICTOR RING TRAVELER CO., Providence, R. I., and Gastonia, N. C.

447 **CONE WINDER**—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

454 **CARD AND PICKER BEARINGS**—Four-page, two-color folder which describes this manufacturer's ball and roller bearings for cards and pickers.—SOUTHERN STATES EQUIPMENT CORP., Hampton, Ga.

458 **CONICAL RINGS AND FLYERS**—Special data available on the Herr conical rings and flyers.—



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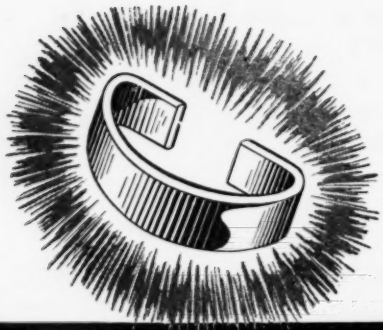

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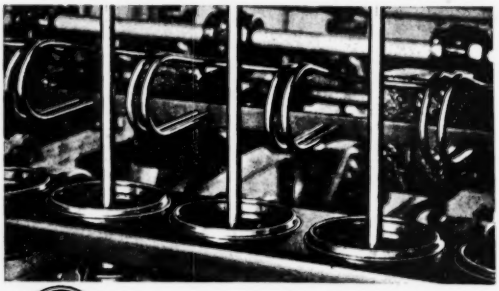

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461 **PRECISE WIND MACHINE**—Form A-92 describes the Foster Model 75 widely used for winding straight or pineapple cones and tubes of rayon, nylon and other filament yarns.—FOSTER MACHINE COMPANY, Westfield, Mass.

464 **COILER CONVERSION**—Color brochure describing this company's new 15" coiler conversion for cards, combers, and drawing frames. The big package is discussed and the parts for conversion are pictured, along with advantages and savings gained by the conversion.—PETTY MACHINE COMPANY, INC., Gastonia, N. C.

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508 **LOOM PRODUCTION CHARTS**—Convenient celluloid card showing yards per loom per week of 40 hours at various loom speeds.—RALPH E. LOPER CO., Greenville, S. C.

517 **LOADING SYSTEM**—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices. — THE FOXBORO COMPANY, Foxboro, Mass.

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610 **PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY** — Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Pre-Boarding and Automatic Boarding Machines for hosiery. —PROCTOR & SCHWARTZ, INC., 7th and Tabor Rd., Philadelphia, Pa.

619 **HIGH SPEED TENTER FRAME**—Illustrated leaflet showing modern design features which give greater production, longer life and fewer seconds.—MARSHALL AND WILLIAMS CORP., Providence, R. I.

630 **VAT DYEING OF WOOL**—Write for Calco Technical Bulletin No. 797 outlining fundamental dyeing procedure, and explaining new advances in the technology of wool dyeing and finishing.—CALCO CHEMICAL DIVISION, AMERICAN CYANAMID CO., Bound Brook, N. J.

640 **"CIRCULATING" SKEIN DYEING MACHINE**—Booklet illustrating the principle behind the stainless steel machine which have "Revolutionized Skein Dyeing," for filament and spun synthetic yarns in skein form.—SMITH, DRUM & CO., Philadelphia 33, Pa.

646 **FOLDER**—Circular No. 1062 describes this ceiling type square frame Folder with swing rolls for making the fold mounted on a horizontal axis. Ball-bearing throughout.—BIRCH BROTHERS, INC., 32 Kent St., Somerville, Mass.

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DYESTUFFS, CHEMICALS, SOAPS

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765 **HOSIERY FINISHES AND FORMULAS**—Attractive new booklet describing the Amalgamated line of hosiery finishes and giving numerous finishing formulas.—AMALGAMATED CHEMICAL CORPORATION, Philadelphia 34, Pa.

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777 **HOSIERY DYEING**—Catalog on hosiery dyeing machinery, skein dyeing machinery, package dyeing, extracting and drying equipment.—SMITH, DRUM AND CO., Philadelphia 33, Pa.

778 **DESIZING ENZYME**—Data sheet "HT" describes new stable high temperature desizing agent. Effective on both starch and gelatine sized goods. Being used by the continuous pad-steam method.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

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907 **"FLATLOCK" MACHINE**—Folder No. 902 describing, with illustrations, flat seaming operations on knit underwear, lingerie, etc.—WILLCOX & GIBBS SEWING MACHINE CO., 214 West 39th St., New York, N. Y.

MATERIALS HANDLING

1002 **BASKETS & TRUCKS**—Illustrated catalog describing canvas baskets and trucks of all types and sizes with recommended uses emphasized.—MEESE, INC, Madison, Ind.

1004 **PITTSBURGH COLLAPSIBLE CARGO CONTAINERS**—Stacked they lock in place and permit visible inventory; collapsed they nest in small area. Base permits entry by all types of lift trucks. Write for brochure MH-15.—PITTSBURGH STEEL PRODUCTS COMPANY, Pittsburgh 30, Pa.

1008 **CASTERS AND WHEELS**—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1029 **ELECTRICAL INSULATING MATERIALS**—Bulletin G.F.-50 describes 5 high-strength plastics: Diamond vulcanized fiber; Vulcoid, A C-D dielectric material; Dilecto, a laminated thermosetting plastic; Celoron, a fabric-base molded plastic; and Micabond, mica in most usable form. Full information on each in forms available.—CONTINENTAL-DIAMOND FIBRE COMPANY, Newark, Dela.

MISCELLANEOUS

1110 **CUTTING MACHINES**—A collection of specification sheets and general descriptive matter covering cutters for thread waste, staple, fiber, etc. Complete description and uses.—TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

1111 **BRUSHES**—A 26-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.—GASTONIA BRUSH COMPANY, Gastonia, N. C.

1115 **TEXTILE WRAPPING MACHINES**—Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made.—HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1122 **BALING PRESSES**—Bulletins available describing this company's line of motor-driven and hydraulic baling presses for finished-goods, textile fibers, wool, and waste of all kinds.—LOGEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wis.

May, 1952

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News in Brief

(*Continued from page 79*)

man print works has developed a new process for joining cloth together so that a sewn joint does not produce an unusable portion of cloth in every 40 or 50 meters of cloth. Now, the cloth is inserted into the printing machine and is cut at the butt-end into overlapping strips of about 200 mm. The strips are then coated with a rubber solution and vulcanized in an electrically heated press (10 kw) for about 45 seconds. A good joint results, and the cloth can be run continuously.

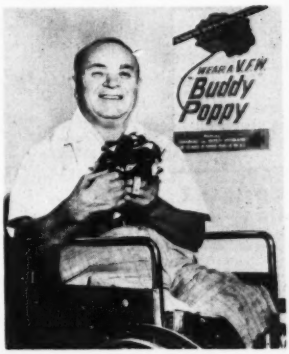
Illegal Union Shop Contract. The NLRB has held for the first time that a union shop contract made by a non-complying union is illegal and will not bar a rival union's representation petition. The 1951 amendment eliminated the union shop election requirement but provided that a union could lawfully make a union shop contract only if it had received a certification of compliance from the Board within twelve months prior to making the contract.

New Colors. Two chemists, Prof. Dr. Walter Theilacker and Dr. Werner Schmid, of the Hannover Technical School, have recently discovered some new colors which are reported to change color with a change in temperature. The new colors are expected to have a wide and practical application in textiles as well as in advertising and other industries.

Work Loads on W & S Weaving Machines. Participants in the American Association of Textile Technologists' spring field trip to Bachmann-Uxbridge Worsted Corp. were told of this mill's plans to install over 100 Warner and Swasey weaving machines. 48 of these machines are now in operation weaving 16-oz military shirting at 240 picks per minute. Present work loads call for one weaver per 12 W & S machines; no change from that in the conventional loom section. However, William J. Thornley, assistant treasurer, pointed out that an increase in machine assignments seems inevitable. This, he said, is based on the higher efficiency indicated by the W & S machines, a decrease in the operator fatigue factor, and the reduced weaver supervision which appears to be required for most fabric constructions. Another influence is the improvement in working conditions in the W & S weave shed due to the low noise level generated by these machines.

Garnett Problem. Recently devised FTC rules for labeling acetate and rayon are imposing a difficult problem on garnetted stock sellers and buyers. Few have the equipment to run fiber identification tests, and a good percentage of garnett operations in the synthetic waste line has been with blends. The deluge of new fibers being supplied the industry has made the job of fiber identification more tedious, exacting, and technological.

Color Picture for Deering, Milliken. "Fabric Magic" is the title of



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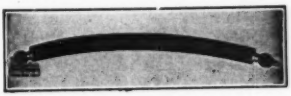

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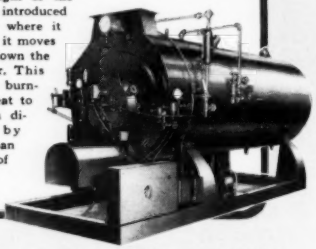

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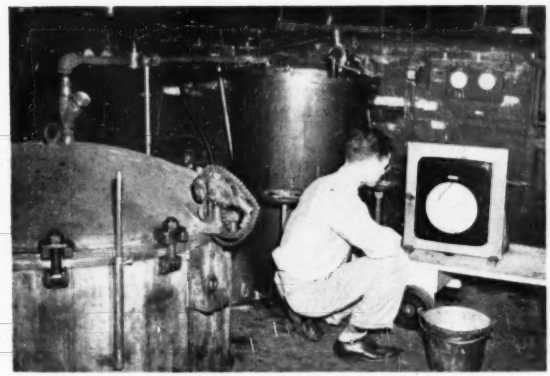
John:
Those analyses which the Penick & Ford Textile Laboratory in Atlanta made for us certainly helped solve our warp sizing problems.
Jim



Franklin Process Experiments with Controlled Vat Dyeing

Under the direction of Dr. Warren L. Towle, the Franklin Process Company is investigating Redox potential measurement for control of vat dyeing and various aspects of the Marhen process. One of the objectives of the experimentation now nearing completion is to provide automatic means of properly reducing the dye bath with the most economical balance of chemicals.

Hydro and caustic, as well as the dyestuffs, are expensive, and any measurement that will permit control of their amounts will be of value to the dyer. Better quality is another factor. By controlling the potential, prevention of overreduction and shade changes is possible in package dyeing. Batch-to-batch uniformity is assured.

The reducing potential of a batch is dependent upon the amount of hydro and caustic in solution. An EMF Foxboro Dynalog, calibrated in millivolts of reducing potential, is the instrument Franklin is using to determine this potential. It is directly connected to a platinum electrode which measures the potential with respect to a calomel reference electrode. No auxiliary amplifier as used in pH measurement is required.

As shown in the accompanying photo the recorder and electrodes required to measure reducing potential are arranged for portability as a convenience in Franklin's investigation of the Marhen process. The envisaged installation for package dyeing is a panel mounted recorder attached permanently to an immersion type electrode.

a 20-minute color picture just completed for Deering, Milliken & Company. The picture shows the successful results in blending "Orlon," "Dacron," and nylon with wool to obtain a new wrinkle-proof fabric of great utility.

Swiss Knit Goods Exports. During 1951, Swiss knit goods exports reached an all time high, exceeding the 1950 figures by well over 30%. The greatest consumer of Swiss goods was the U. S. A., followed by Britain who increased her imports by 100% over 1950. Australia imported 700% more, and the Union of South Africa's import figures rose by 800%.

Fabric Purchases in 1950. In the dress industry, rayon and rayon blends represented 43% of the dollar fabric purchases in 1950; cotton, 42%; woolens, 10%; silks, 3%; nylon, 2%. In the intimate apparel industry, 88% of all cutters bought man-made fabrics in some form; one-half bought cottons; 3% bought woolens. Rayon accounted for 16%

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of dollar fabric purchases in menswear; rayon-wool blends another 4%; other synthetics and blends 2%. 43% of the dollar purchases among makers of men's sportswear were spent on synthetic piece goods. Rayon accounted for 17% of the total dollar fabric purchases in the coat and suit industry. Wool declined about 10%. 33% of fabric purchases for skirts, slacks and jackets were woolens; rayons now lead with 37%.

Hosiery Imports. Hosiery imports in 1951 showed a decrease of 4.4% compared to 1950. Imports rose during the first six months and declined steadily during the last six months of the year. The average price per dozen pairs of imported hosiery was higher than in 1950.

Cotton Piece Goods Exports Increase. Exports of cotton piece goods from the U. S. were 45% greater in 1951 as compared to 1950. Exports amounted to 807,388,000 square yards as compared to 554,777,000 square yards in 1950. Shipments to Africa increased 230%; Asia 102%; Oceania 204%. Major markets in 1951 in order of importance were: Canada, Philippines, Indonesia, Union of South Africa, Cuba, Iran, Venezula, Thailand, Haiti, Belgian Congo, Ceylon, Dominican Republic, and British Malaya.

Fair Trade Practices. A new declaration of fair trade practices for the protection of housewives, the buying public, and the trade against careless and misleading claims as to quality of sheets, pillowcases, and bedsheeting, which re-emphasizes standards adopted in 1939 and broadens their scope, has been promulgated by the sheet and pillowcase industry.

Full-Fashioned Industry Needs Modernization — Germany. The West German full-fashioned stocking industry is at present equipped with about 16,000 divisions, compared to only 8,500 at the end of 1950. Production has risen from 14,000,000 pairs in 1950 to about 30,000,000 pairs annually; an increase of more than 100%. Perlon is used in about 60% of production, and German trade circles predict that by the end of the year the proportion will rise still further. The need to re-equip and modernize the full-fashioned stocking industry was emphasized at a meeting of the stocking manufacturers' group within the General Association of German Weavers and Knitters in Munich. Modernization is preferred to a further extension of manufacturing capacity, it is said. The need for quality and high standards would be increasingly important as stockings were exported into a highly competitive world market.

Growth and Taxation of Chemical Industry. Production capacity of the U. S. chemical process industry, following a 5½ billion dollar expansion in 1951, will be increased 12 per cent this year and will amount to two and one-half times the 1939 capacity, according to Dr. F. J. Soday of the Chemstrand Corp. Despite an increase in sales of close to 25 per cent, 1951 chemical profits after taxes were some 20 per cent lower than in 1950—a direct result of increasing taxation, which took 67 per cent of the total chemical company profits during the first nine months of 1951. All industry is suffering in the same manner, he said.

Mandatory Salary Adjustment Form. The Office of Salary Stabilization has issued Form 300. Use of the form is mandatory in applying for a salary adjustment for any employee within the jurisdiction of the Salary Stabilization Board. Copies of Form 300 may be obtained from local offices of the Wage and Hour Public Contracts Division, U. S. Department of Labor.

British Exports Hit by Competition. Australia has cut British textile imports by 80%. The Far East has accepted cheaper Japanese goods, India has turned to exporting rather than importing, and Germany is undercutting British goods in Scandinavian markets. Many British mill owners believe their export trade will never again be more than a trickle in view of competition abroad.

U. S. Firm to Invest in Israel Mill. Oscar Kohorn & Co. Ltd., are participating in the planned

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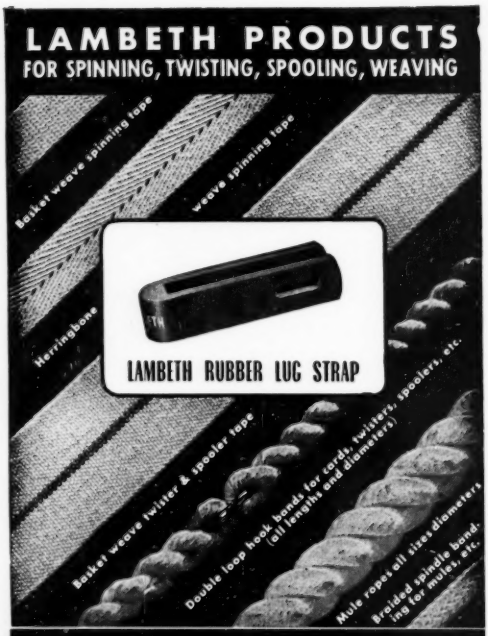
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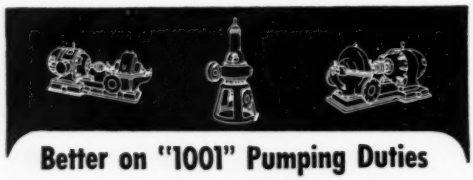

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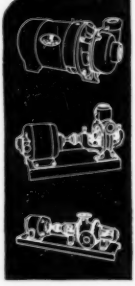

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This is a reprint of 26 pages 8½ x 11 of a series of articles which were previously published in "Textile Industries," containing valuable information, illustrations, tables, charts and diagrams.

Fay H. Martin was a recognized authority on the roving frame. This book has been adopted by textile schools and vocational schools. May be secured in conjunction with a 3-year subscription to "Textile Industries" for $5.00 (Foreign, $11.00).

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Executives and Foremen Disagree on Problems of Supervisors

Executives and foremen don't see eye to eye on the major problems confronting supervisors today. This fact is revealed in a survey just concluded by the Research Institute of America which shows that supervisors feel their fourth most serious problem is "working under pressure," while their bosses rank it thirteenth in a list of topics on which they would like to see their foremen given guidance."

"Of course, there are many areas of agreement in the preferences and interests of the two levels of management," the Institute observes, "but the points of difference cut across the basic areas of supervisory concern—human relations, administration, economic education."

Identical questionnaires were answered by 2,000 executives and a similar number of supervisors, covering the subjects they considered most important for the latter.

Both areas of management gave a high rating to the problem of building initiative among work forces. But the survey also reveals that only 65 per cent of those on the top level feel their supervisory personnel need guidance on how to get along with the boss, while among supervisors, almost 80 per cent feel they need it.

In addition to the topic of working under pressure, here are four other subjects on which there was significant variation:

1. "How to give orders. How do you get willingness to execute them? What about energetic and accurate performance?" This subject was ranked first by top management, fifth by supervisors.

2. "How to read employees' minds. The supervisor should know what's eating the employees; symptoms of mounting irritation; their understanding of policies, instructions, assignments—and most important, how to draw out employee reactions and suggestions." This was rated first by supervisors, fourth by higher management.

3. "How to watch costs. Top management does it always. How can supervisors do it in their own departments?" Management rated this one third; supervisors, seventh.

4. "Business finance. Where the company gets its money—sales, financing from private leaders; what it does with its money—labor, material, and equipment costs; profits and where they go." Top management ranked this topic tenth, while supervisors put it way down in 20th place.

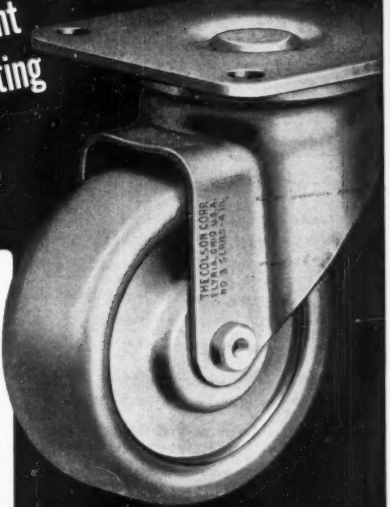
The survey concludes by declaring that the "failure to think alike is not evidence of a communications breakdown—though that may be a factor in some companies. Even with the best interchange of information and opinion, supervisors are bound to develop their own unique set of values because they are subject to a distinctive set of pressures, different from higher management's."

establishment of an $8,000,000 rayon plant in Nathanya, Israel. The project is still open to American investors to the extent of $1,000,000. To be known as United Rayon Corporation Ltd., the company plans to establish a rayon spinning mill with a daily capacity of two tons of filament rayon yarn, five tons rayon staple, two tons rayon tire yarn, and one-and-one-half tons cellophane.

Dynel Dyeing Costs. Lower costs for dyeing dynel are foreseen by Harry K. Townsley of Carbide and Carbon Chemicals Company. He cited the "controlled addition of copper" technique, a method developed in Carbide's laboratories, as typical of new procedures. This method uses copper as a dye assistant in achieving economically a wide range of fast colors on fabrics of dynel and other acrylic fibers.

Abrasion Resistance Test for Non-Wovens. A method of testing the abrasion resistance of nonwoven fabrics is described in a

Speed Up Your Old Equipment with New Load-Floating Colson Casters



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report now available at the Office of Technical Services, U. S. Department of commerce.

Report on Children's Clothing. A report indicating what American mothers do or do not like about various fibers used in nine items of children's clothing has been released by the U. S. Department of Agriculture, Bureau of Agricultural Economics, Washington.

Cellulose Factory in Hungary. A Budapest newspaper recently reported that a new cellulose factory is to be erected in Hungary in 1952. The cellulose will be extracted only from straw.

Whitin Host to AATT. A demonstration of long staple spinning on the American system was the focal point of the American Association of Textile Technologists' visit to Whitin Machine Works on their spring field trip. The roving and spinning system shown was the "Robbins" type, similar to the one in operation at Robbins Mills, Inc., Raeford, N. C.

Contracts for Labor Surplus Areas. Armed Services Procurement Regulations have been modified to permit: (a) Firms in labor surplus areas to meet low quotations on negotiated contracts submitted by firms not in such areas; (b) firms in labor surplus areas to submit proposals for contracts after initial solicitation of proposals; (c) "set-asides" or quantities of a procurement held from formal advertising for bids for the purpose of direct negotiation. Price differentials are not authorized. A panel of the Surplus Manpower Committee heard witnesses representing management, labor unions in the textile industry, and members of Congress.

Swiss to Produce "Mirlon" Fiber. Mirlon, a development of Perlon with the addition of copolymers under Swiss patents, is to be produced in Switzerland as soon as international patent complications have been overcome. Production of a 1.2 denier staple fiber is being planned. The fiber has less elasticity and more resistance to friction than other fibers of the same type, and it is suitable blended with wool.

Less Foreign Aid Money for Cotton. Although some cotton may be financed under future foreign aid, the quantity will be much less than in the past. During the four years of the Marshall Plan, almost $1.5 billion has been expended to finance exports of cotton. The figure is estimated to equal the payments for 7.5 million bales, or nearly 40% of our total exports during the four-year period. It is estimated that only 10 to 12 per cent of 1951-52 exports will move under the foreign aid program.

Method for Treating Dye Waste. Now in the laboratory stage, a new method for treating dye waste includes running the waste through a special material from which it is emitted as clear as drinking water, according to Harold R. Murdock, consulting engineer, of Atlanta, Ga. Speaking in Char-

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lotte, before a meeting of the Piedmont-Carolina Section, American Society of Mechanical Engineers, Mr. Murdock said the process has not been tried on a commercial scale but has been successful in laboratory runs. If commercially practical, it will be a major step toward elimination of stream contamination by dyers.

"Catenon" — Generic Term for Man-Made Fibers? Based on the Latin word catena for chain, "catenon" has been suggested as a generic term for the man-made fibers. The proposal was made to a subcommittee of D-13 of the American Society for Testing Materials; however the suggested name has not been favorably received by the merchandising trade.

German Fair for N. Y. A representative product selection of every section of the German textile industry is the aim of a permanent exhibition which is to be organized by the Trizonia Corporation of New York in collaboration with the German textile industry.

Escrow for Contributions. WSB has ruled that in certain circumstances employers and employees may place their health and welfare contributions in a temporary escrow fund pending board action on the schedule of benefits to be financed by the contributions.

Data on Texas Cotton. Research Report No. 14 titled "Fiber Properties and Processing Data of the Texas Cotton Crops" covers crops from 1949-52. The report is in booklet form and has been issued by Cotton Merchandising Research of the University of Texas, a research organization sponsored by the Cotton Research Committee of Texas.

Continuous Bleach for Wool. Several carpet producers are commercially bleaching wool by a continuous hydrogen peroxide dry-in process. After raw wool scouring, the stock is impregnated with the peroxide in the final bowl and then dried. No washing is required, though peroxide traces must be removed prior to dyeing.

Standardized Styles in East Germany. The East German clothing industry is planning organization along the lines followed by the Soviet Union. As in the U. S. S. R., the production of 5,000 garments to a style is to be the rule; whereas a maximum of up to 300 garments per model was usual. A big feature is to be the simplification of clothing without sacrificing anything in the way of taste. In the East German zone a uniformity of women's styles is already noticeable.

Fabric Versatility Award. Textron, Inc., has won the Hess Brothers Award for versatility in design and use in the fabrics division. The selection was made for their Indian Head cotton, a bal-

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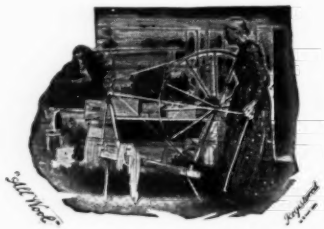
anced weave which prevents skewing in cutting, wearing, sewing, and laundering, whose multiple uses permit it to be used for all types of wearing apparel and home accessories.

Flammability Test Adopted by AATCC. The national council of the American Association of Textile Chemists and Colorists has adopted as a standard procedure the flammability test for consumer fabrics which has been developed during the last five years. Adoption of the test was prompted by the need for a standard test method on which to base legislative action which is expected to follow the recent interest in garments which flash-burn.

Carders Guild Program. At the spring meeting of the Carders Guild of the National Association of Woolen and Worsted Overseers, to be held at the Narragansett Hotel in Providence, R. I., on May 16, Frank Kelliher of Whitin Machine Works is scheduled to speak on wool card maintenance. A question and answer period will follow his talk.

Crepeing Nylon. The number of the patent covering A. L. Dorgin's process for crepeing nylon yarn is 2,575,008 instead of the number published on page 79 of the March, 1952, issue of TEXTILE INDUSTRIES.



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(*Continued from page 99*)

The placard is illustrated with diagrams of the right and wrong way to load the feed apron. It also lists, step by step, the procedure for processing a round. Here are some of the pointers given the operators:

The number of bales placed around each feed are to conform proportionally to the required amounts of specific wools used in a round. In making up the sandwich, an even layer of wool from the largest percentage of bales should be spread on the table. The second largest aggregate of wool in the blend is to be stacked on top of the first layer. The remaining components of the blend are similarly layered in rotation, and the process is repeated until the entire round is finished.

High Licker-in Speed Permits 40% Increase in Card Production

(*Continued from page 103*)

on higher grades of cotton. Tests on individual cards, using raw-stock dyed cotton as the samples, show results comparable to those obtained on the tests on 10s and 18s yarn.

Waste. An analysis of fly indicated that there was no increase in waste; rather there was a slight decrease. The fly was analyzed on a Shirley Analyzer, and we found on the slow speed licker-in that there was 21% lint fiber, 47% trash, and 31½% cage loss. Employing the high speed licker-in there was 18% lint, 61% trash, and 21% cage loss.

In comparing the two samples, note that the trash, as compared to the lint fiber, was considerably higher on the high speed licker-in. The cage loss was much higher on the slow speed licker-in. The reduction in cage loss appears to be consistent. On the overall waste percentage, cage loss has averaged ¼ of one per cent lower on all types of stock tested. A Shirley Analyzer test of the fronts of the card shows 98% lint at high licker-in speed and 97% lint at normal licker-in speed on the lower grade mixes.

There is a marked reduction percentage-wise (40-60%) in the flat strips because card production was increased 40-60%, and the amount of strips taken out remained constant. Strips remain at 22 grains per flat on the lower grade mixes, and 17 grains per flat on the higher grade mixes.

No difference was noted in the amount of cylinder strips removed, in that all of the cards were equipped with continuous strippers. Tests to date, both on large and small scale, indicate that there is a large potential increase in production, and the change should produce an advantage throughout the mill.

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(2)	Irregular surface on doffer comb caused fibers to lap or run past comb blade resulting in damaged doffer and cylinder.	Overhaul combs; mill and grind fingers of comb before riveting blade to comb.
(3)	Stock plucked in by feed roll.	See that feed roll is true and correctly weighted.
(4)	Operators have trouble in piecing ends at higher doffer speed, thereby permitting excessive waste.	Institute special training program for card tenders.
(5)	Lack of uniformity in carded work.	Better grinding and setting is imperative, especially on mote knives and licker-in screen.

ACKNOWLEDGEMENT

The author wishes to give credit to John F. Bogdan of North Carolina State College School of Textiles for his preliminary work in research on high licker-in speeds, which was the basis of the Swift investigations and eventual practice.

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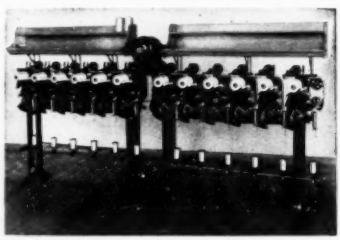

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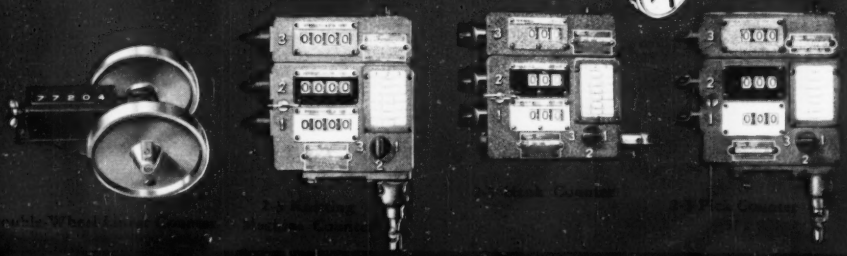

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